

Surgery

DEPARTMENT OF SURGERY, UNIVERSITY OF TORONTO

ANNUAL REPORT

JULY 1, 1998 - JUNE 30, 1999

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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. J. Cameron — Sunnybrook and Women's College Health Sciences
Centre (Orthopaedic and Arthritic Campus)
Dr. L. Lickley — Sunnybrook and Women's College Health Sciences Centre
(Women's College Campus)
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. B.R. Taylor - General Surgery
Dr. C.H. Tator - Leslie Dan Professor and
Chair of Neurosurgery
Dr. J. Waddell - A.J. Latner Professor and
Chair of Orthopaedic Surgery
Dr. P. Neligan - Plastic Surgery
Dr. T. Todd - Thoracic Surgery
Dr. M.A.S. Jewett - Urology
Dr. K.W. Johnston - R. Fraser Elliott Chair in Vascular Surgery
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 three campus model through which our teaching hospitals are being collected over the past year continues to evolve. The resultant change has been, in large, positive, although a number of logistical problems in amalgamating our teaching hospitals continue to consume considerable time and effort. Fortunately, the transition has not adversely affected our teaching programs and the needs of our full-time faculty are gradually being accommodated. Dr. Bernard Goldman has been appointed Surgeon-in-Chief of Sunnybrook and Women's College Health Sciences Centre and Dr. Eric Poulin at St. Michael's Hospital. Dr. Paul Walker has resigned as the James McCutcheon Chair and Surgeon-in-Chief of the University Health Network to become Vice-President of the Toronto General Hospital. Dr. Bryce Taylor has assumed the role of Surgeon-in-Chief at the University Health Network. Dr. Zane Cohen has continued his able leadership at Mount Sinai Hospital, which remains a separate corporate entity, with significant integration into the Surgical Oncology Program through Princess Margaret Hospital.

Our Surgical Scientist Program continues to grow and strengthen and, from a financial perspective, is now almost self-sustaining through generous ongoing support from the Surgical Alumni Fund and Johnson & Johnson. The various matching programs for graduate student support at the University of Toronto has been a tremendous benefit to this program.

Research funding continues to grow in the Department and has almost doubled over the past seven years. The remarkable productivity listed in this Annual Report provides tremendous ongoing satisfaction for me as Chair of the Department.

of particular note this year, is the completion of terms of office of a number of individuals who have provided tremendous leadership in recent years. These include Dr. Paul Walker as Surgeon-in-Chief of the University Health Network; Dr. Paul Muller, Surgeon-in-Chief at St. Michael's Hospital; Dr. Jameel Ali as Director of Postgraduate Education; Dr. Charles Tator as the Dan Family Chair in Neurosurgery; and Dr. Bryce Taylor as Chair of the Division of General Surgery. I cannot say enough about how

hard and effectively these individuals have worked to promote the interests of this Department. They have consistently placed the interests of others before their own to make this Department clearly the premier one in Canada. We recently had the opportunity to demonstrate to a large cohort of faculty from McGill University how we have built our infrastructure and programs over the years to support excellence in teaching and research.

Our surgical education group, under the leadership of Dr. Richard Reznick, Director of the Centre for Research in Education; Dr. Bill Tucker as Chair of our Undergraduate Education Committee; and Dr. Carol Hutchison as the Director of the Surgical Skills Centre have improved their already superb programs and have been very productive in various aspects of surgical educational research, which have received substantial external recognition. The Surgical Skills Centre, based at the Mount Sinai Hospital, has become the model for many major American universities wishing to develop similar programs. Dr. Richard Reznick has been appointed President Elect of the Association for Surgical Education and their annual meeting will be held in Toronto next spring. Dr. John Bohnen has been appointed Director of Postgraduate Education to replace Dr. Jameel Ali, and because of his personal interests will undoubtedly emphasize the teaching of quality improvement in surgery to our trainees. It is clear from the foregoing that education is an important career track for academic surgeons that has been established in our Department and recognized by the Faculty of Medicine through the promotion of many of our educators.

Lastly, I would be remiss not acknowledging support from this Department from our out-going Dean, Dr. Arnold Aberman. Arnie has honed communication in a large Faculty of Medicine to a fine art. He has been a stalwart supporter of academic excellence. His leadership style, sense of humor and ability to solve difficult problems will be missed greatly by all sectors of this Faculty. We wish Arnie every success in whatever endeavor he decides to pursue following completion of his seven years as Dean.

Visitors to the Department

Dr. Terry Peters, University of Western Ontario, was a Visiting Professor to the Department of Surgery on October 9, 1998 and presented on The use of 3D imagery in surgery. Dr. Miles F. Shore, Bullard Professor of Psychiatry, Harvard University, was a Visiting Professor to the Department on February 11 and 12, 1999 when he conducted a leadership workshop and

was the Kergin Lecturer. His topic was Medical leadership and the future of health care .

Dr. Martin Gleave, Professor, Division of Urology, University of British Columbia, was the John Palmer Lecturer on March 5, 1998. His topic was Hormone therapy for advanced prostate cancer : Beyond simple castration .

Dr. Alexander W. Clowes, Professor and Chief, Division of Vascular Surgery, University of Washington School of Medicine was the Gordon Murray Lecturer and the Gallie Bateman Judge on May 14, 1999. His topic was Vascular gene therapy .

Departmental and External Awards and Honours

Jameel Ali (GenSurg) was presented with a plaque at the awards ceremony of the Society of Surgeons of Trinidad and Tobago in recognition of ten years of devotion to the care of the trauma patient through the establishment and continuation of the Trauma Program in the training of the physicians and paramedical personnel in trauma care in Trinidad and Tobago. Also, at the recent annual meeting of the National Association of Emergency Medical Technicians held in Winston-Salem, North Carolina, Jameel was the recipient of the Pre-hospital Trauma Life Support Leadership Award for his work on the international promulgation of Pre-hospital Trauma Training and Research. Jameel, a member of our Trauma Team at St. Michael's Hospital is the first Canadian surgeon to receive this prestigious award. He was also the first Canadian surgeon to receive the American College of Surgeons Committee on Trauma Meritorious Service Award previously for his pioneering work on training physicians in trauma resuscitation throughout the world.

Oleh Antonyshyn (PlasSurg) was the invited speaker for the Fraser N. Gurd Lecture of the American Association for the Surgery of Trauma, and Trauma Association of Canada combined meeting in Baltimore, Maryland. The topic of the lecture was "Craniofacial trauma: Evolution of current techniques and outcomes".

Robert Bell (OrthSurg) was recently appointed a member of the Commission on Cancer of the American College of Surgeons.

Mark Bernstein (NeurSurg) has received the 1998 R. Fleming Surgical Education Award of the Division of Neurosurgery.

Earl Bogoch (OrthSurg) has been named to the Editorial Board of the Journal of Rheumatology.

Mark Catral (GenSurg) has been selected for membership in the Society of University Surgeons.

Leo Chaikof (GenSurg) is the recipient of a W.H. Anderson Teaching Excellence Award at the Toronto General Hospital.

Michael Cusimano (NeuroSurg) was awarded the 1999 E. Bruce Tovee Teaching Award for Undergraduate Teaching.

Michael Fehlings (NeurSurg) has been named to the Senior Editorial Board of Neurosurgery. Michael was also appointed Deputy-Editor-in-Chief of Spine. Spine is the international peer-reviewed journal for clinical and basic studies related to the spine and spinal cord.

The Urology Research Lab at the Toronto Western Hospital has won the second prize for an essay it submitted to the 1999 American Urological Association/Circon-ACMI Prize Essay Contest. Drs. Magdy Hassouna (Urol) and Yungin Wang were the authors for the essay entitled "Role of the C-afferent system in the mechanism of sacral nerve root neuromodulation". The prize was awarded at the American Urological Association meeting in Dallas in May 1999.

Sender Herschorn (Urol) has been awarded the prestigious University of Toronto, Faculty of Medicine Colin R. Woolf Award for long-term contribution to continuing education. This is a faculty wide competition and this is the first time that a urology faculty member has received this award. He was also the keynote speaker at the St. Lawrence Urology Group annual meeting at Carling Lake, Quebec in February 1999. This is the annual urology resident scientific meeting for Queen's, Ottawa and McGill Universities, State University of New York at Syracuse, and the Universities of Montreal, Laval and Sherbrooke. Sender spoke about

"Current concepts in the treatment of female stress urinary incontinence and the use of bowel in the reconstruction of the lower urinary tract".

Wayne Johnston (VascSurg) has been reappointed as Chair of the Division of Vascular Surgery for a four year term effective July 1, 1998.

Shafique Keshavjee (ThorSurg) won the 1999 George Armstrong-Peters Prize. First awarded in 1912, the Peters Prize honours younger surgeons who have sustained continuing productivity in basic science research.

Jarley Koo (GenSurg) with co-investigators Leo Mahoney (GenSurg), Lavina Lickley (GenSurg) and Rashida Haq (Med) have been chosen to carry out a tamoxifen and raloxifane (STAR P-2) breast cancer prevention study. This seven-year double-blind study will follow 22,000 postmenopausal women 35 years or older who are at increased risk for developing breast cancer.

John Marshall (GenSurg) is the recipient of the 1999 Lister Prize which is awarded to an investigator who has shown outstanding and continuing productivity of international stature as evidenced by research publications, grants held, students trained and other evidence of stature of the work produced.

Robin McLeod (GenSurg) has been made a member of the James IV Association and was also elected to the Board of Governors of the American College of Surgeons at its Clinical Congress in Orlando, Florida.

Gordon McLorie (Urol) was elected to the position of Vice-President of the Canadian Urological Association at the annual meeting in Halifax. He will become President-Elect next year and will also be the Canadian Urological Association President for the meeting held in Toronto in 2001.

Charles Peniston (CardSurg) is the recipient of a W.H. Anderson Teaching Excellence Award at the Toronto General Hospital.

Walter Peters (PlasSurg) has been invited by the Institute of Medicine in Washington, D.C. to be an international external reviewer for the U.S. Court-Ordered National Academy of Sciences report on the "Safety of Silicon Breast Implants". This is particularly significant because it is the

definitive report from the government of the United States on the ultimate safety of breast implants.

Glenn Regehr (Educ) has won the Young Educator's Award from the Association of Medical Colleges.

Richard Reznick (GenSurg) is the 1999 recipient of the "Distinguished Contribution to Medical Education Award" sponsored by the Canadian Association of Medical Education (CAME) and the Association of Medical Media. The award was presented at the Canadian Association of Medical Education luncheon on May 3, 1999 during the Canadian Association of Medical Education/Association of Canadian Medical Colleges meetings in Winnipeg. Richard has also been appointed Vice President, Education at the University Health Network.

Ori Rotstein (GenSurg) is the recipient of the W.H. Anderson Teaching Excellence Award for Program Development at the Toronto General Hospital.

Barry Rubin (VascSurg) has been selected for membership in the Society of University Surgeons.

Robert Salter (OrthSurg) has been made an honorary member of the newly-created International Cartilage Repair Society in recognition of his outstanding contributions to the science of cartilage injury and repair.

Hugh Scully (CardSurg) has been elected as Ontario's nominee for the position of Canadian Medical Association President-Elect. Pending Canadian Medical Association Council endorsement, Hugh will assume the office of Canadian Medical Association President at the Canadian Medical Association annual meeting in 1999.

Hugh Thomson (PlasSurg) has been awarded the Distinguished Fellow Award of the American Association of Plastic Surgeons. It is the Association's highest honour.

Richard Weisel (CardSurg) has been elected Vice-Chair of the American Heart Association's Council of Cardiac, Thoracic and Vascular Surgery. He will assume the position of Chair in 2001.

Resident Awards and Honours

Lily Angelov (NeurSurg resident) and Matthias Feldkamp (NeurSurg resident) tied for the winning presentation in the Thomas P. Morley Neurosurgical Resident Research Prize competition. Lily's presentation was entitled "Inhibition of angiogenesis by blocking activation of the vascular endothelial growth factor receptor-2 leads to decreased growth of NF-1 neurogenic sarcomas". Matthias' project was titled "Expression of activated epidermal growth factor receptors, Ras.GTP, and MAPK in human glioblastoma multiforme specimens".

Lily Angelov (NeurSurg resident) has also won the Canadian Congress of Neurological Sciences McKenzie Prize in Basic Science Research for her project on anti-angiogenic therapy with VEGFR-2 inhibitor.

Michael Borger (CardSurg resident) was awarded a Physicians Services Incorporated Foundation Resident Research Prize for his paper entitled "Decreasing incidence of stroke following valvular heart surgery". He was also awarded a research fellowship from the Heart and Stroke Foundation of Canada. Michael was also awarded the Edwards Christie Stevens Fellowship and the Graham Campbell Fellowship from the Postgraduate Medical Education office.

Robin Boushey (GenSurg resident) has won first prize at the Eastern Students Research Forum held at the University of Miami for his clinical poster presentation entitled "Glucagon-like peptide-2 prevents intestinal damage, decreases mortality and enhances epithelial regeneration in murine models of experimental enteritis". He was also one of three graduate students chosen to receive a travel award from the Institute of Medical Science (IMS) to participate and act as a representative at the annual Eastern Student Research Forum in Miami, Florida in February 1999. Robin has also won the Society for Clinical Investigation 1998 Trainee Award. The award was presented at the Canadian Society for Clinical Investigators/Royal College meeting in September 1998. He also received an award for the best poster presentation at the Annual Assembly of General Surgeons and a Canadian Scientist Clinical Investigator Award for the best paper entitled "Potential role of GLP-2 in the treatment of indomethacin induced enteritis: A model for Crohn's disease".

Sarah Burrow (OrthSurg resident) received the second place award at the American Academy of Pediatrics (Section in Orthopaedics) for the best paper presented by a resident. Her paper was entitled "Relationship between short stature and endocrinopathy in slipped capital femoral epiphysis". Her supervisors are James Wright and Benjamin Alman.

Steve Casha (NeurSurg resident) has received the 1999 Mayfield Award of the Joint Section on Disorders of the Spine and Peripheral Nerves of the American Association for Neurological Surgeons/Canadian Neurosurgery Society for his work entitled "Relationship of delayed oligodendroglial apoptosis to axonal degeneration after traumatic spinal cord injury .

Gideon Cohen (CardSurg resident) was awarded the Miriam Neven Scholarship from the Postgraduate Medical Education office. He was also awarded the Starr Medal for his paper entitled "Optimal pre-conditioning in a human model of ischemia and reperfusion".

Peter Ferguson (OrthSurg resident) was awarded the Canadian Society of Surgical Oncologists outstanding resident research paper award for his presentation "Intradermal injection of autologous dermal fibroblasts improves wound healing in irradiated skin" at the Society's meeting in Montreal. At the Canadian Orthopaedic Residents' Association meeting in Vancouver in May 1998, Peter was awarded the Pennal Award for the most outstanding research paper for the same project.

Tony Finelli (Urol resident) was awarded the 1999 Struthers Scholarship. Since his rotation at St. Michael's Hospital, he has continued to show an interest in endourology and stone disease and has recently submitted an article on percutaneous nephrolithotomy to the Journal of Urology.

David Hackam (GenSurg resident) has been awarded the William S. Fenwick Fellowship by the Postgraduate Medical Education office.

Catherine Haywood (PlasSurg resident) has won a prize for the best Clinical Paper in the Residents' Corner at the Canadian Society of Plastic Surgeons annual meeting for her paper "Diagnosis and management of streptococcal necrotizing fasciitis, including immune therapy: Recent experience with 20 cases".

Richard Hopper (PlasSurg resident) has won the best poster prize at the Canadian Society of Plastic Surgeons annual meeting.

Sevan Hopyan (OrthSurg resident) won third prize for his basic science paper presentation "Growth plate regulation and cartilage tumor proliferation: A paradigm" at the Canadian Orthopaedic Residents' Association meeting in Vancouver.

Angelo Iocca (Urol resident) has been awarded the Resident Undergraduate Teaching Award for the Division of Urology.

John Lau (OrthSurg) was awarded first prize for best clinical paper by the Canadian Orthopaedic Residents Association for his work "The effects of tarsal tunnel release and stabilization procedures on tibial nerve tension in a surgically created pes planus foot".

Joan Lipa (PlasSurg resident) has won a prize for the best resident research paper at the Canadian Society of Plastic Surgeons meeting for her paper "ET1 induced vasoconstriction in human and pig skin flaps: Differences in endothelin receptor subtypes". Joan was also the recipient of the 1999 D.R. Wilson Award.

Robert Nam (Urol resident) and John Preiner (Urol resident) have tied for first place for the Clinical Research Prize at the annual Urology Research Day. Robert for "Cost comparison of molecular versus conventional strategies for superficial bladder cancer surveillance" and John for "Improved sperm concentration after varicocele repair in infertile men with severe oligospermia". He was also awarded the Zeneca Canadian UroOncology Group research award at the annual Canadian UroOncology Group meeting in Halifax.

Frank Papanikolaou (Urol resident) was awarded one of two student/resident prize paper awards by the Canadian Fertility and Andrology Society.

Vivek Rao (CardSurg resident) has been awarded the Chisholm Memorial Fellowship by the Postgraduate Medical Education office. He was also awarded the Paul C. Samson Resident Award at the 24th annual meeting of the Western Thoracic Surgical Association for his paper entitled "A novel comparison of stentless versus stented valves in the small aortic root". He

was also awarded the Starr Medal from the Postgraduate Medical Education office for his paper entitled "Stimulating aerobic metabolism following cardioplegic arrest". Vivek has also won the Siminovitch-Salter Award for outstanding scholarly contributions throughout his PhD program. He was also the winner of the 1999 Bernard Langer Surgical Scientist Award.

Sandro Rizoli (GenSurg resident) has won the Bayer Fellowship in Surgical Infectious Disease of the Canadian Association of General Surgeons.

Jennifer Sarjeant (GenSurg resident) has been awarded the Issei Scholarship in Medicine and Surgery.

John Tsihlias (Urol resident) has won the Basic Research Prize at the annual Urology Research Day for his work "Growth arrest of LNCaP human prostate cancer cells by high dose dihydrotestosterone: Role of cycline dependent kinase inhibitor".

1998 Sherwood-Davis and Geck Awards

The winners of the 1998 Sherwood-Davis and Geck Awards are:

Mohammed Al-Sayyad (OrthSurg resident) - "Results of cementless total hip arthroplasty in patients with avascular necrosis".

Robin Boushey (GenSurg resident) - "The therapeutic role of GLP-2 in the indomethacin induced enteritis: A model for Crohn's disease".

Peter Bray (PlasSurg resident) - "Allograft microvascular transplantation of epiphyseal plates with short-term immunosuppression".

Andrew Campbell (CardSurg resident) - "Vascular endothelial growth factor gene transfer to the pulmonary circulation reduces monocrotaline-induced pulmonary hypertension".

Robert Gryfe (GenSurg resident) - "APC 11307 K hypermutability: A novel mechanism of inherited polyposis and colorectal cancer risk".

Babak Jahromi (NeurSurg resident) - "Do infectious agents play a causal role in carotid atherosclerosis?".

Richard Kaminker (OrthSurg resident) - "Results of anterior lumbar interbody fusion using the BAK implant".

Ian McGilvray (GenSurg resident) - "Monocyte transmigration induces tissue factor: Role of the MAP kinases" .

1998 Kennedy Visiting Professorship Awards

The following orthopaedic awards were given out at the annual Kennedy Visiting Professor Day held November 5, 1998:

Sarah Burrow - The Hospital for Sick Children Pediatric Award for the best pediatric paper. Her paper was entitled "Quality of care: The role of the peripheral hospital in pediatric orthopaedics".

Kevin Deitel - Canadian Back Institute Award as selected by Dr. Hamilton Hall for best resident spinal paper. His paper was entitled "Non-operative treatment of thoracolumbar burst fractures".

Sevan Hopyan - Robin Sullivan Memorial Award for excellence in basic science and research. His paper presented at Orthopaedic Research Day was entitled "The growth plate indian hedgehog pathway maintains cartilage tumor proliferation".

Peter Weiler — R.B. Salter Award for Excellence in Teaching as voted by the orthopaedic residents.

Albert Yee — R.I. Harris Postgraduate Award for best graduating resident as voted by the Faculty.

Reviews, Searches and Appointments

Dr. Charles H. Tator completed his ten year term as Chair of the Division of Neurosurgery June 30, 1999. Dr. James Rutka was appointed Chair of the Division of Neurosurgery effective July 1, 1999.

Dr. Bryce Taylor completed his ten year term as Chair of the Division of General Surgery. Dr. Zane Cohen was appointed Chair of the Division of General Surgery effective July 1, 1999. Dr. Taylor was appointed Surgeon-

in-Chief of the University Health Network (Princess Margaret Hospital/Toronto General Hospital/Toronto Western Hospital).

Dr. Jameel Ali completed his ten year term as Director of Postgraduate Education, Department of Surgery, June 30, 1999. Dr. John Bohnen was appointed Director of Postgraduate Education commencing July 1, 1999.

Dr. Eric Poulin was appointed Surgeon-in-Chief of St. Michael s Hospital (Wellesley and Bond Sites).

Dr. Paul Walker was appointed Vice-President of the Toronto General Hospital.

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, 1998.

Dr. Fred Brenneman, Dr. Paul Marks and Dr. Charles Wright were promoted to Assistant Professor.

Dr. Terry Axelrod, Dr. Keith Jarvi, Dr. Ren-Ke Li, Dr. Alan Lossing, Dr. Mark Mittelman and Dr. Emil Schemitsch were promoted to Associate Professor.

Dr. Paul Greig, Dr. Richard Reznick, Dr. Robin Richards and Dr. Michael Schwartz were promoted to Full Professor.

Comings and Goings

Our Department was strengthened this year by the recruitment of the following: Dr. Labib Abouzahr (Cardiac Surgery), Sunnybrook and Women s College Health Sciences Centre; Dr. Stephanie Brister (Cardiac Surgery), Toronto General Hospital; Dr. Lori Burrows (Research), The Hospital for Sick Children; Ms. Kathryn Chorney (Biomedical Communications); Dr. Charles Cutrara (Cardiac Surgery), Sunnybrook and Women s College Health Sciences Centre; Dr. Peter Dirks (Neurosurgery), The Hospital for Sick Children; Dr. Annie Fecteau (General Surgery), The Hospital for Sick Children; Dr. Jeffrey Fialkov (Plastic Surgery),

Sunnybrook and Women's College Health Sciences Centre; Dr. J. Theodore Gerstle (General Surgery), The Hospital for Sick Children; Ms. Jodie Jenkinson (Biomedical Communications); Dr. Yves LeClerc (Cardiac Surgery), St. Michael's Hospital; Dr. David Szalay (Vascular Surgery), St. Joseph's Health Centre; Dr. Herbert von Schroeder (Plastic Surgery), Toronto Western Hospital; Dr. Paul Wong (Orthopaedic Surgery), Toronto East General Hospital; Dr. Terrence Yau (Cardiac Surgery), Toronto General Hospital.

The following have left the Department during the 1998-1999 academic year: Dr. Haig Basmajian, Dr. Michael Black, Dr. Mark Mittelman, Dr. Paul Salo, and Dr. Siva Sriharan.

UNDERGRADUATE EDUCATION

Dr. William Tucker, Director

The 1998-99 academic year was an eventful and productive one for those involved in undergraduate education in the Department of Surgery. I would especially like to thank the faculty members and students who served on the Undergraduate Education Committee, whose advice and support contributed greatly to the effective operation of our undergraduate teaching program.

Richard Reznick stepped down from the Undergraduate Education Committee after many years of effective participation to assume new responsibilities as the Vice-President for Education at the University Health Network. He has been ably replaced on the Undergraduate Education Committee by Peter Kalman.

Michael Cusimano, a superb undergraduate teacher, and a major contributor to the Undergraduate Education Committee and the Education Research Committee of the Department, was the deserving recipient of the Bruce Tovee Award for Undergraduate Teaching and a W.T. Aikins Award for individual teaching performance. Joan Lipa, a plastic surgery resident, won the D.R. Wilson Award for outstanding undergraduate surgical teaching by a resident.

John Murnaghan organized a faculty development workshop for new members of the Department, which was held on April 30, 1999. John Wedge, Bryce Taylor, Ori Rotstein, Zane Cohen and Linda Dann provided an excellent orientation to the Department and its organization and important operational processes. John Murnaghan, Bill Tucker, Jameel Ali, Gail Darling and Stan Hamstra outlined the undergraduate and postgraduate educational activities of the Department and the procedures for teaching evaluation and recognition. Small group workshops on aspects of undergraduate teaching completed the program. The feedback from the participants was very positive, and further similar workshops are being planned.

The faculty in our Department were encouraged to submit more Summer Scholarship Program opportunities for undergraduate medical students, and there was an excellent response, with approximately twenty new placements offered in the Department of Surgery. The Summer Scholarship

Program allows our Department to recruit good students early in their careers, and in the past some of the best applicants for postgraduate training in surgery have had their first exposure to surgery through participation in these summer experiences.

Stan Hamstra summarized some of the major themes from his debriefings of the clinical clerks on surgery since he assumed his position. These themes reveal areas for potential improvement which the Undergraduate Education Committee members will endeavour to pass on to their colleagues at the academies. As a result of information gleaned from the debriefings and other interactions with the clinical clerks, Stan has prepared an orientation package for the clerks on surgery which will be available for the 1999-2000 academic year.

Beginning in July 1999, Helen MacRae took over the supervision of the surgery component of the fourth year medicine/surgery OSCE from Michael Cusimano, who had done the job effectively for several years.

The educational research productivity of our faculty was reflected again this year by several significant contributions to the undergraduate and postgraduate programs at the Association for Surgical Education meeting. There were in all four papers delivered, two workshops held, and a scientific exhibition presented at the Association for Surgical Education by members of our Department of Surgery and their research fellows.

To conclude on a further upbeat note, we learned that the University of Toronto students did substantially better than the national average on the surgery items on the 1998 MCCQE(1) examinations. Such gratifying performance was not seen on the items for several other disciplines at the University of Toronto. All of you who participate in undergraduate surgical education in our Department can be justly proud.

POSTGRADUATE EDUCATION

Dr. Jameel Ali, Director

This past year has seen many changes in the area of postgraduate education in the Department of Surgery at the University of Toronto.

This will mark the end of my ten year term as Director of Postgraduate Education and the new Director of Postgraduate Education in our Department effective July 1, 1999 will be Dr. John Bohnen from the Division of General Surgery at St. Michael's Hospital.

All of our CaRMS positions were filled after reviewing 292 applications and interviewing 217 applicants.

We have acquired computer technology that will allow us to reliably analyze performance of residents in our Principles of Surgery examinations and we have also acquired over 1,000 new questions for this bank. It is hoped that the new Principles of Surgery examination will be reactivated in the Fall and be conducted on an annual basis. This exam will be based on the Royal College curriculum as well as topics discussed at the Principles of Surgery seminars, which continue to be co-ordinated by Dr. Martin McKneally.

Dr. Carol Hutchison has shown great leadership in spearheading the activities of the University Centre for Surgical Skills at Mount Sinai Hospital. A large research grant has been acquired from the Physicians Services Incorporated Foundation to assess the effectiveness of this Centre in training surgical residents. The curriculum for this Centre has been expanded and is under continuous review and it is anticipated that subspecialty skills sessions will be conducted specifically for the different disciplines in surgery.

Faculty-wide symposia have been conducted through the Centre for Research in Education which is directed by Dr. Richard Reznick and this Centre continues to attract high-calibre fellows who pursue graduate degrees in education. After five years as Chair of the Education Research Committee Dr. Michael Cusimano is now stepping down and we wish to thank him for his dedication in directing this committee. The Surgical Scientist Program continues to be the highlight of our training program and most of our trainees are enrolled in the Royal College Clinical Investigators Program. Effective July 1999, there will be partial funding of this program through grants from the

Dean's office based on awards acquired by the surgical trainees in the Surgical Scientist Program.

A Practice Management Symposium was conducted in November 1998 and this was very highly rated and co-ordinated by Dr. Marcus Burnstein. This will continue on an annual basis for the senior residents.

Career Night for undergraduate students involved a presentation by all surgical specialties for the undergraduate students explaining the career opportunities in the different disciplines in surgery. It is anticipated that this will continue for the following year on an annual basis but the format will change and include separate booths for each specialty so that the undergraduate students may visit each of the booths and have their questions answered pertaining to the different specialties.

Our performance in the Royal College certification examination for the surgical specialties for the year 1998-99 continues to be very good. Thirteen candidates in general surgery passed their written examination, eight neurosurgery trainees were successful, in plastic surgery four passed, in orthopaedic surgery six passed and in urology five passed.

In the Division of Neurosurgery, Dr. Bill Tucker stepped down as program director shortly after assuming the role of Director of Undergraduate Education in the Department. Dr. Charles Tator has undertaken this responsibility on an interim basis.

Dr. Bryce Taylor and Dr. Charles Tator have completed their terms as Heads of their Divisions and we wish to thank them for their support of the postgraduate training program.

The Bruce Tovee Postgraduate Award was given to Dr. Jameel Ali for his contribution to postgraduate education in the Department and his direction of the Advanced Trauma Life Support Program for our postgraduate trainees in the Department.

Congratulations to Dr. Mitch Brown for winning the first Surgical Skills Teaching Award for his contributions to the Surgical Skills Centre, and to Dr. Joan Lipa who received the D.R. Wilson Teaching Award for the best resident teacher.

A great deal of our time continues to be spent in preparation for the upcoming Royal College accreditation of surgical programs. Internal reviews are conducted and many of our surgical staff are participating in these internal reviews. The office of Postgraduate Surgical Education has played a very important role in maintaining the strong tradition of excellence in postgraduate training at the University of Toronto. Continued strong leadership from the new Director of Postgraduate Education, and the continued resident advocacy role of the support staff in the departmental office, as well as the strong support of the Chair of the Department of Surgery for surgical training, should ensure continued excellence in surgical training at the University of Toronto.

It has been a distinct pleasure being the Director of Postgraduate Education in the Department of Surgery at the University of Toronto and in this my last report I wish to extend sincere appreciation and thanks for the co-operation and assistance provided by all of the members of our Department and especially the previous Chair, Dr. Bernie Langer, our present Chair, Dr. John Wedge, and most importantly Dr. Bryce Taylor my predecessor.

I join the Department in welcoming Dr. John Bohnen as our new Director and I feel confident that under his directorship our Department will continue to reach even further heights of excellence.

RESEARCH

Dr. Ori D. Rotstein, Director

The research effort of the Department of Surgery continues to thrive. The Surgical Scientist Program remains the gem of our departmental activities. More than thirty-five individuals were involved in the past academic year, representing all of 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. A few are highlighted as follows: At the Institute of Medical Science Research Day, Robin Boushey, Robert Gryfe and Michael Borger were awarded J.C. Laidlaw Prizes for excellence in research, while Robert Nam received first prize for student research in the Clinical Epidemiology and Health Care Research Program. On the national scene, Lilyana Angelov was awarded the Canadian Congress of Neurological Sciences McKenzie Basic Science Research Prize and Gideon Cohen received the 1999 Canadian Research Award for Specialty Residents of the Royal College of Physicians and Surgeons of Canada, co-sponsored by the Canadian Society of Clinical Investigators and PAIRO. Steven Casha was given the Mayfield Award of the Joint Section of Disorders of the Spine and Peripheral Nerves of the American Association of Neurological Surgeons and Andrew Campbell won an award for his work presented at the American Thoracic Society. Dr. Vivek Rao won the Bernard Langer Surgical Scientist Award, given to the most worthy recent graduate of the Surgical Scientist Program.

The Gallie-Bateman resident research competition was again a great success. This year's competition was judged by Dr. Alexander W. Clowes, from the Division of Vascular Surgery, University of Washington School of Medicine. His lecture highlighting advances in gene therapy in vascular disease was truly inspiring and stimulating for all in attendance. Ten excellent resident papers were presented. Drs. Andrew Campbell and Ian McGilvray were co-winners of the Gallie-Bateman resident research competition. Dr. Campbell presented his work on gene therapy for pulmonary hypertension, while Dr. McGilvray proposed novel intracellular signalling pathways in host macrophages which might impact on the virulence of malaria.

The George Armstrong-Peters Prize for best young investigator in the Department was awarded to Dr. Shaf Keshavjee for his work in lung transplantation. The Lister Prize for the best senior investigator was awarded to Dr. John Marshall, citing his research contributions in the area of inflammation in the critically ill patient.

The Research 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 has initiated discussions aimed at raising the profile of non-clinician scientists in the Department, has developed a scheme for tuition reimbursement for the Surgical Scientist Program participants, and aided in the fine tuning of research job descriptions for surgeons. Finally, the Committee acts as a vehicle for dissemination of information on several important issues, including issues surrounding the new provincial and federal funding initiatives, as well as the development of the Canadian Institutes of Health Research. Finally, we are indebted to Val Cabral for her skillful administration of all aspects of the departmental research activities.

In summary, this has been an excellent year for research in the Department of Surgery. Our accomplishments have been many and the profile of the research activities of the Department has increased substantially. We look forward to continued success from our present faculty and our new recruits.

DIVISION OF CARDIAC SURGERY

Dr. Richard Weisel, Chair

The Division of Cardiac Surgery at the University of Toronto is growing. The government has mandated that we increase the volume of cardiac surgery at each of the three adult teaching hospitals. As a result, new staff who are capable of academic excellence are being recruited to each of the three hospitals. Fortunately, our Surgical Scientist Program is producing qualified academic cardiac surgeons for these positions.

Dr. Terrence Yau joined the Division of Cardiac Surgery at the Toronto General Hospital and was awarded a grant from the Heart and Stroke Foundation in his first application. Other outstanding individuals with excellent academic qualifications are being interviewed for positions at the Sunnybrook and Women's College Health Sciences Centre and St. Michael's Hospital.

The Division's academic productivity was outstanding this year, as illustrated by the awards and publications listed in the annual report. In addition, our trainees received international recognition for their academic achievements. Dr. Michael Borger received the J.C. Laidlaw Award of Excellence from the Institute of Medical Science, and won first prize at the Terrence Donnelly Cardiac Surgery Resident competition. Dr. Andrew Campbell was awarded the C. Walton Lillehei Award of the American Association of Thoracic Surgery for the best paper by a resident. He also won first prize in the Gallie-Bateman competition in the Department of Surgery. Dr. Gideon Cohen was awarded the Canadian Research Award for Specialty Residents from the Royal College of Physicians and Surgeons of Canada, co-sponsored by the Canadian Society of Clinical Investigators and PAIRO. Dr. Paul Fedak won a poster prize at the University of Toronto Cardiovascular Scientific Day, and was awarded a grant from the Physicians Services Incorporated Foundation to study the effects of internal mammary bypass grafting in patients with poor ventricular function. Dr. Stacey O'Blenes received the Wilfred Bigelow Prize at the Terrence Donnelly Cardiac Surgery resident competition. Dr. Vivek Rao received the Paul C. Samson Resident Award from the Western Thoracic Surgery Association, and was given the Bernard Langer Surgical Scientist Award from the Department of Surgery.

DIVISION OF GENERAL SURGERY

Dr. Bryce Taylor, Chair

The Division of General Surgery and its leadership were reviewed in January 1999, at the end of the ten year term of Bryce Taylor. As Robert Stone indicated in his report General surgery at the University of Toronto in January 1999 is an excellent division. It is the standard against which all Canadian divisions should be measured. Indeed, I believe this program ranks among the top ten on the continent ".

The planning exercise, which occupied much of the spring of 1999, came to fruition in a document which was prepared and presented in September 1999. The document, entitled " Toward 2020 ", drew attention to current achievements, future directions, and a process of documentation which in future will address changing times, ongoing resource issues, and university restructuring.

Restructuring discussions were plentiful during the year, although major geographic changes will likely not take place for at least two years. The Women's College Hospital and the Sunnybrook Health Sciences Centre, as well as St. Michael's Hospital and The Wellesley Central Hospital continue to devise the best ways that their academic services can be rationalized ultimately on one site.

Postgraduate Training

The following residents were successful in completing the general surgery program in 1999: Nasser Al-Zahrani, Nancy Baxter, Aaron Beder, Bonnie Burke, Chris Davreux, Sophie Dessureault, Susan Hegge, Ryan Heisler, Roberta Minna, Andrew Pierre, Juan Sanabria, and Angelo Vivona. All were successful in the Royal College spring examinations in general surgery.

Those residents engaged in full-time research during the 1998-99 academic year were: Steve Borenstein, Robin Boushey, Priscilla Chiu, Rob Gryfe, Erin Kennedy, Geeta Lal, Jennifer MacMillan, Saul Mandelbaum, Ian McGilvray, George Oreopoulos, Sandro Rizoli, David Urbach and Alice Wei. These residents were awarded a number of research scholarships as well as important prizes for their innovative work.

Jameel Ali stepped down at the end of a very successful ten year term as Director of Postgraduate Education in the Department of Surgery, and that position was assumed by another capable general surgeon, John Bohnen.

The Division made important contributions to the newly-opened Surgical Skills Centre at the Mount Sinai Hospital. In particular, Lorne Rotstein's tireless efforts added tremendously to the technical education of PGY1 and PGY2 residents from all specialties.

Promotions and Job Descriptions

Recognition of academic achievements has led directly to promotion. We now have in the Division, 11 full professors, 17 associate professors, 25 assistant professors, and 9 lecturers -- a remarkable achievement for a single university surgical specialty. The job descriptions, or academic roles introduced this last year, reflect the overall contributions of our 36 full-time general surgeons in the University of Toronto family. We have 7 surgeon-scientists, 5 surgeon-investigators, 10 surgeon-teachers, 8 surgeon-specialists, and a further 6 who are one of these with an additional major administrative role. This represents a reasonable balance of roles, each of which provides unique service to the University.

Honours and Awards

During the academic year, Bernie Langer was elected to the Vice-Presidency of the American Surgical Association, and Richard Reznick became the President of the Association for Surgical Education, in addition to receiving the distinguished Contribution to Medical Education Award from Canadian Association of Medical Education. John Marshall won the University of Toronto, Department of Surgery Lister Prize, and also was elected as Recorder for the Society of International Surgery. Paul Greig was recognized as the best lecturer in the Principles of Surgery lecture series. Jameel Ali was presented with a plaque honouring his ten year commitment to the training of trauma care-givers in Trinidad and Tobago, and was also given the Pre-hospital Trauma Life Support Leadership Award by the National Association of Emergency Medical Technicians. Robin McLeod became a member of the James IV Association, and was also elected to the Board of Governors of the American College of Surgeons. Bryce Taylor was appointed as Surgeon-in-Chief and Director of Surgical Services at the University Health Network.

Residents were very successful in their academic endeavors this year. Robin Boushey was a runner-up in the Gallie-Bateman competition, and was awarded first prize in the Eastern Students Research Forum, an Institute of Medical Science Travel Award, a Society for Clinical Investigation Trainee Award, and received his 1998 Canadian Society of Clinical Investigators Award at the Royal College meeting in September 1998. Rob Gryfe shared the 1999 Canadian Society of Clinical Investigators/Medical Research Council of Canada Award for excellence in resident research, while Ian McGilvray won the Gallie-Bateman resident research competition. Sandro Rizoli gave the best resident paper at the Baltimore Trauma Association meeting. Glen Regehr won the Young Educator's Award from the Association of Medical Colleges. David Hackam was given the William S. Fenwick Fellowship by the Postgraduate Medical Education office of the Faculty of Medicine, and Steven Borenstein won the Chisolm Memorial Fellowship. Saul Mandelbaum presented the best poster at the Annual Assembly of General Surgeons in June 1999, and the best papers at that conference were presented by David Hackam and Robin Boushey.

Special Events

The Annual Assembly of General Surgeons took place once again in the first week in June, with Steve Gallinger and his general surgery research committee organizing an outstanding day of education and research. Dr. Tim Billiar was the Bruce Tovee Lecturer, and highlighted a conference of plenary presentations, a posters session, an educational segment, and the final State of the Union Address by Bryce Taylor.

The 39th Annual Update Course for practicing general surgeons was held at the end of April 1999 and consisted once again of a three-day session devoted to a variety of topics. The visiting professors were Ed Bradley, Peter Singer, Robert Buckman, Balfour Mount and many local faculty who made superb presentations to a very large registration.

DIVISION OF NEUROSURGERY
Dr. Charles Tator, Leslie Dan Professor and Chair

Resident Achievements

All four resident candidates passed the Royal College examinations and received their FRCSC degree: Drs. Miriam Kim, Kamal Thapar, Philip Porter and Eric Marmor. They completed this Division's tenth consecutive year record of 100% success at the Royal College examinations. Congratulations to all residents and faculty!

Kamal Thapar received a PhD degree from the Department of Cellular and Molecular Pathology (supervisor Dr. Kalman Kovacs) and Sagun Tuli received an MSc degree from the Department of Public Health and Epidemiology at Harvard University (co-supervisor Dr. James Drake).

Lily Angelov received first prize in the 1999 Morley Awards of our Division, the K.G. McKenzie Prize for Basic Science Research from the Canadian Neurosurgical Society, and was a finalist at the Gallie-Bateman resident research competition. Steve Casha won the Mayfield Award of the Joint Section of Disorders of the Spine and Peripheral Nerves of the American Association of Neurological Surgeons/Canadian Neurological Surgeons, first prize at the research presentations at the University of Toronto Trauma Day and second prize in the 1998 Morley Awards. Matt Feldkamp was a finalist in the Gallie-Bateman resident research competition, and won first prize in the 1999 Morley Awards. Wai Ng won first prize in the 1998 Morley Awards. Sagun Tuli received the Surgical Research Award at The Hospital for Sick Children. Kamal Thapar won the van Wagenen Fellowship of the American Association of Neurological Surgeons.

Several residents received externally funded fellowships and awards during the year: Lily Angelov — National Cancer Institute of Canada fellowship; Steve Casha — Ontario Neurotrauma fellowship; Matt Feldkamp - Medical Research Council of Canada (1999) fellowship and National Cancer Institute of Canada (1998) fellowship; Howard Ginsberg - Medical Research Council of Canada fellowship and Restracom (The Hospital for Sick Children) fellowship; Babak Jahromi — Physicians Services Incorporated Foundation operating grant; Ab Kulkarni - Duncan Gordon Fellowship (The Hospital for Sick Children) and McMaster University

entrance scholarship; Wai Ng - Institute of Medical Science scholarship; Sheilah Singh — Physicians Services Incorporated Foundation operating grant; and Michael Taylor - National Cancer Institute of Canada fellowship. Also, several residents were successful during the year in applying for funds for the 1999-2000 year: Warren Ho - OGSST fellowship, Savoy Foundation fellowship, Neuroscience Foundation fellowship and Joint Heart and Stroke/Medical Research Council of Canada fellowship; Babak Jahromi - American Association of Neurological Surgeons fellowship and Medical Research Council of Canada fellowship; Todd Mainprize - Restracom fellowship (The Hospital for Sick Children); Nicholas Phan - Ontario Neurotrauma fellowship; and Eve Tsai - fellowships from the Joint Section on Disorders of the Spine and Peripheral Nerves, American Association of Neurological Surgeons/Canadian Neurological Surgeons and the Ontario Neurotrauma Foundation.

Congratulations to Lily Angelov, the first neurosurgical resident to give birth (a boy), and to Michael Taylor on the birth of his daughter, and to Tek Soo on the birth of twins (boy and girl).

Faculty Achievements

Mark Bernstein continued as Chair of the Joint Section on Tumors of the American Association of Neurological Surgeons/Canadian Neurological Surgeons, and received the Fleming Teaching Award of the University Health Network. Michael Cusimano won two undergraduate teaching awards — a W.T. Aikins Award and the E. B. Tovee Undergraduate Teaching Award. Michael Fehlings was appointed the first Robert O. Lawson Chair in Neural Repair and Regeneration of the University Health Network/University of Toronto and Deputy-Editor-in-Chief of Spine and Editorial Board member of Neurosurgery. Andres Lozano was appointed the first Ronald R. Tasker Chair in Functional Neurosurgery of the University Health Network/University of Toronto. James Rutka became the first Harold Hoffman/Shoppers Drug Mart Chair in Pediatric Neurosurgery at The Hospital for Sick Children/University of Toronto, was appointed Secretary/Treasurer of the Joint Section on Tumors of the American Association of Neurological Surgeons/Canadian Neurological Surgeons, and the Inaugural Director of the Arthur and Sonia Labatt Brain Tumor Research Centre of The Hospital for Sick Children/University Health Network/University of Toronto. Bill Tucker received the Award of Merit of the Kidney Transplant Program at St. Michael's Hospital. The Charles

Tator Annual Lecture was established by the Canadian Association of Surgical Chairs and the Canadian Association of University Surgeons. Kamal Thapar and Charles Tator won the Hudson Neurosurgical Teaching Awards for the resident and faculty, respectively.

Faculty Research Funding

Our faculty members have continued their excellent record of funding from both external and internal sources. The following had operating grants during the year from several sources: Michael Cusimano - Ontario Neurotrauma Foundation; Karen Davis — Medical Research Council of Canada, National Institutes of Health, and Whitehall Foundation; Peter Dirks — Connaught Foundation, Dean's Fund, and Medical Research Council of Canada; James Drake — Medical Research Council of Canada, Johnson and Johnson, and The Hospital for Sick Children Foundation; James Eubanks - Alzheimer Society, and Medical Research Council of Canada; Michael Fehlings — Medical Research Council of Canada, Ontario Neurotrauma Foundation, Physicians Services Incorporated Foundation, American Paralysis Association, and Spinal Cord Research Foundation; Ab Guha — Heart and Stroke Foundation, Medical Research Council of Canada, National Cancer Institute of Canada, Physicians Services Incorporated Foundation, Lunenfeld Foundation, National Neurofibromatosis Foundation, Cummings Foundation, and American Association of Neurological Surgeons; David Houlden - Ontario Neurotrauma Foundation, and Sunnybrook Trust; William Hutchison — Connaught Foundation, and Parkinson Foundation; Andres Lozano - Medical Research Council of Canada, and Radionics; Raj Midha - Connaught Foundation, Dean's Fund, Physicians Services Incorporated Foundation, and Medical Research Council of Canada; Rick Moulton - Ontario Neurotrauma; James Rutka — two Medical Research Council of Canada grants, National Brain Tumor Foundation, National Cancer Institute of Canada, Physicians Services Incorporated Foundation, and The Hospital for Sick Children; Michael Schwartz — Medical Research Council of Canada; Charles Tator - Lunenfeld Foundation, and Canadian Paraplegic Association; Michael Tymianski - Heart and Stroke Foundation; Chris Wallace — Medical Research Council of Canada, and two Heart and Stroke Foundation grants.

Faculty Personal Support Awards

An excellent measure of productivity of faculty members is their ability to attract funding for their personal salary support as research scientists. Congratulations to the following for their awards: Peter Dirks - Surgical Alumni Scholar (University of Toronto); Michael Fehlings - Career Scientist Award (Ministry of Health); and to Ab Guha, Andres Lozano and Michael Tymianski for the continuation of their Medical Research Council of Canada Clinician Scientist Awards. James Rutka was given a Career Scientist Award of the Medical Research Council of Canada -- a five-year award reserved for the country's top scientists.

New Programs

Our Division added three new academic Chairs this year which in itself is an outstanding achievement and signifies excellent acknowledgment of the academic quality of our faculty members. The University Health Network established the Ron Tasker Chair in Functional Neurosurgery to commemorate Dr. Tasker's internationally recognized contributions to research and teaching in this field. Andres Lozano is the first holder of this Chair; the proceeds of which will be used to advance the academic productivity of this field at the University Health Network. The University of Toronto Robert O. Lawson Chair in Neural Recovery and Regeneration was established by the University Health Network to advance the field of spinal and brain research in recovery and regeneration. Michael Fehlings is the first holder of this Chair. The Hospital for Sick Children has established the Harold Hoffman/ Shoppers Drug Mart Chair in Pediatric Neurosurgery. This Chair is a tribute to Dr. Hoffman's career as an internationally recognized contributor to clinical research and teaching in the neurosurgery of children. James Rutka was appointed as the first incumbent. Each of the three Chairs represents endowments of \$2M in accordance with University of Toronto policy. With the Dan and Ricard Chairs, our Division now has five academic chairs to support its research and teaching activities.

Faculty Changes

Dr. Ron Tasker completed his distinguished career as a researcher, educator and clinician and retired at the end of the academic year. Dr. Siva Sriharan resigned as an Associate at the Toronto Western Hospital and moved his practice to Windsor.

Academic Events

The Division hosted the 75th Anniversary of Neurosurgery in Canada to commemorate the beginning of practice at the Toronto General Hospital in 1923 of Dr. Ken McKenzie, Canada's first career neurosurgeon. The celebration included many academic and social events, which were attended by several hundred neurosurgeons and neuronurses and other neurosciences specialists. There was an outstanding scientific program, which included ten internationally renowned guest lecturers who delivered talks in several theme sessions. Drs. Jules Hardy and Ron Tasker were designated the Anniversary Medalists, and they presented their achievement addresses. There was a very enjoyable social program at which alumni shared their memories with friends at events at the Art Gallery of Ontario and the Royal Ontario Museum.

The Hendrick Visiting Professor was Dr. Hal ReKate from the Barrow Neurological Institute and the University of Arizona, and the Keith Visiting Professor was Dr. Ed Oldfield from the National Institutes of Health at Bethesda. These events provided an excellent learning opportunity for faculty and residents.

Chris Wallace hosted two Lougheed Microneurosurgical Courses which continued to attract residents from across the country and were very successful. Michael Fehlings organized the Spinal Surgery Course at the Canadian Congress of Neurological Surgeons as he has done annually for several years, and Andres Lozano once again hosted a Functional Neurosurgery Course in Toronto, which had a large international attendance.

DIVISION OF ORTHOPAEDIC SURGERY

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

The past year has seen the final recommendations of the Hospital Restructuring Commission have their significant effect on the restructuring of orthopaedic care within the University community. St. Michael's Hospital and the Wellesley Central Hospital have been amalgamated into a single entity, which currently operates on two sites. It is anticipated that with the infrastructure change underway at the Bond Street site there will be full integration of both services on that site within 12-18 months. The amalgamation of the Orthopaedic and Arthritic Hospital with Sunnybrook and Women's College Hospital is in a similar state. The Orthopaedic and Arthritic Hospital campus on Wellesley Street now operates as part of the Sunnybrook and Women's College Health Sciences Centre. Plans for the establishment of an Orthopaedic and Arthritic Institute at the Bayview Avenue site are well established.

With the development of the University Health Network, the Toronto Western Hospital has regained its former identity and planning has begun to recruit new individuals to the orthopaedic division at that hospital.

A new Chair has been established within the Division of Orthopaedic Surgery. This is the Rubinoff/Gross Chair in Orthopaedic Oncology which will be situated at the Mount Sinai Hospital.

The following new appointments were made by the Division of Orthopaedic Surgery in the past year: Dr. Herb von Schroeder has been appointed to the Hand Program at the Toronto Western Hospital and has begun his clinical and research practice. Dr. Paul Wong was appointed to the staff of the Toronto East General Hospital to replace Tom Barrington who has retired from clinical practice.

The Division had a number of outstanding visitors in the past year, most particularly Dr. Jesse Jupiter as the Kennedy Visiting Professor and Dr. Gary Dunnington as our Visiting Research Professor. Both individuals participated fully in their academic duties and challenged students, residents and faculty with innovative and controversial topics.

Several members of the faculty and several residents were recognized for their excellence. Dr. James Wright was appointed as the first Robert B.

Salter Professor in Surgical Research at The Hospital for Sick Children. Dr. Ben Alman received the Robert B. Salter Award from the Canadian Orthopaedic Foundation. Dr. Robert Salter received two outstanding awards - the Medal of Honour from Vanderbilt University and The Hospital for Sick Children Humanitarian Award. Dr. Emil Schemitsch was one of two Canadians awarded the prestigious ABC Travelling Fellowship in Orthopaedic Surgery. Dr. John Lau was recognized for the best resident presentation at the Canadian Orthopaedic Residents Association meeting. Dr. Albert Yee received the R.I. Harris Postgraduate Award for the best performance from a graduating resident over the term of the residency. Dr. Sevan Hopyan received the Robin Sullivan Memorial Award for excellence in basic science research as determined by the visiting research professor. Dr. Peter Weiler was presented with the Robert B. Salter Award for excellence in teaching by the faculty as voted by the orthopaedic residents. Dr. Robin Richards was appointed Deputy Editor for upper extremity surgery for the American edition of the Journal of Bone and Joint Surgery - only the second Canadian to be so recognized by that journal.

Dr. Carol Hutchison received the Ontario Confederation of University Faculty Association's teaching award -- the only orthopaedic surgeon to ever be recognized by such an award.

Several faculty members were successful in achieving promotion in the past year. Drs. Charles Wright and Paul Marks were promoted from Lecturer to Assistant Professor; Drs. Emil Schemitsch and Terry Axelrod were promoted from Assistant Professor to Associate Professor and Dr. Robin Richards was promoted from Associate Professor to Full Professor.

Dr. Gordon Hunter has retired from active practice at the Sunnybrook and Women's College Health Sciences Centre, but continues to be active in the Division of Orthopaedic Surgery. Dr. Barry Malcolm has moved from the Toronto Western Hospital to the Orthopaedic and Arthritic campus of the Sunnybrook and Women's College Health Sciences Centre to continue his interest in the area of disability assessment.

Grant capture by members of the Division exceeded all previous years in 1998 with an excellent balance between peer reviewed competitive grants and industry funding.

The full endowment of the Latner Chair in Orthopaedic Surgery was achieved in the past year. This outstanding accomplishment has resulted in the first fully endowed Chair in Orthopaedic Surgery in Canada. This came about not only through the generosity of Mr. Albert Latner, but also through the efforts and enthusiasm of University of Toronto President Robert Pritchard, Dean of Medicine Arnie Aberman, Professors Bernard Langer and John Wedge and especially Professor Allan Gross.

DIVISION OF PLASTIC SURGERY

Dr. Peter Neligan, Chair

Research

Research within the Division had another successful year, both at the resident and faculty level. Dr. Peter Bray returned to the clinical stream in July 1998, having completed two years in the Surgical Scientist Program. He successfully completed his MSc defense in the Fall. Dr. Zvi Margalio is due to complete his MSc thesis at the end of June and will return to the clinical program in July.

The residents won several awards during the year. Dr. Marc Dupere won the prize for the best clinical paper at the annual Visiting Professor presentations, while Dr. Zvi Margalio won the prize for the best research paper. Dr. Joan Lipa won the D.R. Wilson Award for the best resident teacher within the Department of Surgery and this award was presented on Gallie Day. Dr. Melinda Musgrave won the Sopman Humanitarian Award presented at a reception at the home of Michael and Judy Sopman.

The faculty also won several awards. Dr. Joel Fish won the PAIRO Teaching Award. Dr. Ralph Manktelow won the Arnis Freiberg Teaching Award, while Dr. Christopher Forrest won the W.K. Lindsay Research Supervisor Award. Dr. Mitchell Brown was the first recipient of the newly created University of Toronto Surgical Skills Centre Distinguished Education Award presented at the Gallie Day dinner.

Visiting Professor

The 1999 Hoyle Campbell Visiting Professor was Dr. Scott Spear from Georgetown University in Washington, D.C.

Training Program

Two residents graduated from the program in June 1999. Both were successful in their Royal College examinations. They were Drs. Leila Kasrai and Rob Backstein.

Special Awards

Dr. Jim Mahoney was elected President of the Canadian Society of Plastic Surgeons. Dr. Christopher Forrest was elected parliamentarian of the Plastic Surgery Research Council and Dr. Peter Neligan was elected representative of the Plastic Surgery Research Council to the American College of Surgeons.

New Appointments

Dr. Herb von Schroeder was appointed jointly to the Division of Plastic Surgery and Orthopaedic Surgery, with a clinical appointment to the Hand Program at the Toronto Western Hospital. Dr. Robert Cartotto was appointed to the Ross Tilley Burn Centre at the Sunnybrook and Women's College Health Sciences Centre. Dr. Jeff Fialkov was appointed to the Division of Plastic Surgery at the Sunnybrook and Women's College Health Sciences Centre. Dr. Peter Neligan has become the first holder of the newly created Wharton Chair in Reconstructive Plastic Surgery.

Resignations

Dr. Hugh Thomson resigned from The Hospital for Sick Children. Dr. Thomson has long been a staunch member of the Division of Plastic Surgery at the University of Toronto. He is fondly remembered by many trainees who have come under his guidance and mentorship over the years and wish him well.

DIVISION OF THORACIC SURGERY

Dr. Thomas Todd, Chair

Clinical

This year witnessed the merger of the Toronto General Hospital and Mount Sinai Hospital divisions. This has strengthened our residency program and concentrated our clinical activity to the Toronto General Hospital (in-patient surgery) and Princess Margaret Hospital (oncological ambulatory care).

The transplant program expanded this last year with the initiation of heart-lung transplantation. Two such transplants have now been successfully performed. The program experienced its largest clinical load having undertaken 39 procedures from July 1998 until June 1999.

We have begun to formulate a new clinical program in end stage lung disease. Conceptually, this will be a multidisciplinary program encompassing several specialties and will complement the transplant program. The new program will effect constructive links with the existing programs in emphysema surgery and pulmonary hypertension, as well as permitting expansion in this tertiary care area.

Teaching

The thoracic surgery residency program underwent a Royal College of Physicians and Surgeons of Canada mandated external review in March. As thoracic surgery is a new primary program, formal Royal College approval necessitated the review. We received full approval with no major weaknesses identified.

Dr. Gail Darling has completed her second year as the Chair of ASCM.

The annual postgraduate refresher course was again a success attracting registrants from the United States and abroad. We enjoyed the visitation of three invited professors: Dr. Robert Finley from the University of British Columbia; Dr. David Sugarbaker from Harvard Medical School; and Dr. Alec Patterson from Washington University.

Research

We continue to support two basic science laboratories (Dr. Shafique Keshavjee — transplantation; Dr. Michael Johnston — oncology) that continue productivity with publications in high impact journals.

We have established membership in the new American College of Surgeons trials group and Dr. Gail Darling will be the principle investigator for one of the first trials. Dr. Timothy Winton is the Chair of the National Cancer Institute of Canada trial of post-operative chemotherapy in resected lung cancer. Dr. Thomas Todd continues to recruit patients into the lung volume reduction surgery trial, which should finish this year. If so, it will be the first randomized trial in this controversial area. St. Joseph's Health Centre joined the trial this past year.

Retirement and Recruitment

Dr. F. Griffith Pearson formally retired from clinical activity this June. The thoracic ward at the Toronto General Hospital was named after him in honour of his long and outstanding career as an academic surgeon and teacher. A portrait and plaque were erected on 7 Eaton South.

Dr. Tom Waddell was recruited to the Division and will join the Toronto General Hospital staff in January 2000 after completing yet further research training in Great Britain. He will bring his expertise in intercellular signalling to the transplant group.

Honours and Awards

Dr. Timothy Winton was elected Chair of the medical staff at the Princess Margaret Hospital; Dr. Thomas Todd was elected to the American Surgical Association; Dr. Tom Waddell received a McLaughlin Travelling Fellowship for his research time in Great Britain.

DIVISION OF UROLOGY

Dr. Michael Jewett, Chair

Faculty Appointments, Promotions, Honours and Changes

This past year, the Division faculty consisted of twenty-one geographic full time surgeons, three senior surgeons and one PhD scientist. Collectively, the faculty were visiting professors in all provinces and most states and eight other countries during the year. Leadership was provided in international clinical trials and various urological organizations. Dr. Grant Farrow has completed thirty-three years of clinical practice at the Toronto General Hospital and will join the senior faculty in July.

Dr. Darius Bagli continues to hold a U.S. March of Dimes Basil O'Connor Award for Role of HA-receptor in pediatric bladder disease and is the preceptor of an AFUD Eli Lilly research fellow, G. Capolicchio, for his project Stretch induced activation of local bladder renin-angiotensin system induces fibrosis via RHAMM .

Dr. Lori Burrows was recruited as the Director of the Centre for Infection and Biomaterials Research from the University of Guelph.

Dr. Neil Fleshner was 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.

Dr. Magdy Hassouna s research fellows won several prestigious prizes with work that he supervised. Dr. Shaker won the Northeastern Section of the American Urological Association research award. Dr. Yungin Wang won second prize in the 1999 American Urological Association essay contest for Role of the C-afferent system in the mechanism of sacral nerve root neuromodulation . He continued his funding for neuromodulation from the Veterans of America .

Dr. Sender Herschorn, Deputy Chair of the Division, was awarded the Faculty of Medicine Colin R. Woolf Award for long term commitment to continuing education. This is the first time that a urology faculty member has won this faculty-wide award.

Dr. Michael Jewett continued as Chair of the Division and Head at the University Health Network as The Toronto Hospital is now known.

Dr. Laurie Klotz has been active in clinical trial development and was appointed Chair of the Canadian UroOncology Group (CUOG), the National Cancer Institute of Canada Clinical Trials Group GU Site Committee and the Global GU Group. He also continues as Editor-in-Chief of the Canadian Journal of Urology and was awarded best clinical poster at the annual meeting of the European Urological Association for Phase 3 study of cavernous nerve stimulation during radical prostatectomy with tumescence monitoring .

Dr. Ron Kodama received the A.W. Bruce Undergraduate Teaching Award for the Division of Urology for the fifth year in a row.

Dr. Gordon McLorie is President-Elect of the Canadian Urological Association and was appointed to the Executive of the American Academy of Pediatrics, Section of Urology.

Dr. Paul Merguerian was awarded a Canadian Urological Association Scholarship and a Physicians Services Incorporated Foundation grant to study laser welding and fibrin glue in reconstructive surgery.

Dr. Robert Stewart continued his funding from the Kidney Foundation of Canada for vascular biology studies of VEGF. He will be moving to St. Michael s Hospital in July 1999 where he will continue with his vascular biology research.

Dr. John Trachtenberg continues as Director of the Prostate Centre which is now newly housed in an expanded facility in the Princess Margaret Hospital and is active in the development of public and patient prostate cancer interactive electronic and print media and in clinical trials, particularly in salvage thermotherapy of localized prostate cancer. He is now President-Elect of the Canadian Academy of Urological Surgeons.

Dr. Keith Jarvi has continued funding from the National Institutes of Health to study the role of cystic fibrosis in male infertility and bacterial infections in clinical prostatitis (non-bacterial). In addition, he has funding from the Canadian Cystic Fibrosis Foundation to study the interaction of CF gene mutations and x or y sperm.

Academic Events and Divisional Awards

Our Charles J. Robson Visiting Professor this year was Dr. Peter Scardino, Head, Department of Urology, Memorial-Sloan Kettering Cancer Center, New York.

Research Day 99 was held in conjunction with the Robson Visiting Professorship. The awards for best presentations were:
First Prize Basic Research - Dr. Robert Nam; First Prize Clinical Research - Dr. Owen Prowse; Honourable Mention (Clinical Research) - Dr. Tony Finelli.

The annual graduation ceremony (TURP 1999 for Toronto Urology Party) took place at Hart House 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 acknowledgment of retirees and new faculty members. Our guest was Professor Emeritus, Dr. John Leyerle who addressed the significance of medieval rose windows.

Dr. Michael Robinette was awarded the Postgraduate Faculty Teaching Award by the senior residents. Drs. Munir Jamal and Tony Finelli were awarded the Resident Undergraduate Teaching Award as the best resident teacher.

Dr. Tony Finelli, was also awarded the second annual Struthers Scholarship for studies in stone disease.

Dr. Kenneth Pace was awarded the A.W. Harrison Teaching Award for teaching clinical clerks at the Sunnybrook and Women's College Health Sciences Centre during the first half of the 1998 academic year.

Postgraduate Education

Dr. Ron Kodama continued as Program Director with Dr. Leslie Carr organizing Urology School. Graduates of the program in 1999 were Drs. Owen Prowse, Jonathan Giddens, and Kenneth Pace. All last year's graduates were awarded their fellowships. This year the urology Royal College fellowship exam was held in May. Drs. Giddens and Pace received their fellowships.

We will welcome four new PGY1's in July: Dr. Ethan Grober, McMaster University; Dr. Tara Moskalyk, University of Ottawa; Dr. Peter Vlaovic, University of Toronto and Dr. Fadi Joudi from the American University in Beirut.

There were a total of eighteen residents in the Program. In addition, there were eleven fellows in clinical and research positions. The Hospital for Sick Children, Division of Urology, Fellowship Program has been accredited by the American Academy of Pediatrics as one of six in North America and the only one in Canada.

The 5th 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 4th year students interested in urology attending. A short list of twenty-one applicants were interviewed by the University of Toronto, Division of Urology for three positions.

Drs. Eddie Matsumoto, Helen Lee, and Tony Finelli will join the Surgical Scientist Program to study for their Master's in education under the supervision of Dr. Stan Hamstra, in vascular biology under Drs. Phil Marsden and Rob Stewart, and in microbiology and biomaterials under Dr. Lori Burrows respectively. Dr. Sharon Sharir finished her Master of Public Health at Columbia University on a National Cancer Institute postdoctoral fellowship in cancer epidemiology and Dr. Rob Nam was awarded his MSc in clinical epidemiology under Dr. Steven Narod. Both will join the regular rotation as PGY4s.

Dr. Owen Prowse has created an innovative, interactive CD ROM in uro-radiology that was recognized for presentation at both the annual meetings of the Canadian and American Urological Associations.

Dr. Robert Nam, resident in the Surgical Scientist Program received the following awards: (1) Clinical Epidemiology and Health Care Research Program Student Research Day 1999 Prize for his project entitled, Serum human glandular kallikrein-2 (hK2) protease levels predict the presence of prostate cancer among men with elevated prostate specific antigen, (2) The F.M. Hill Research Award at the Sunnybrook and Women's College Health Sciences Centre for his paper entitled Significance of the CAG repeat polymorphism of the androgen receptor gene in prostate cancer progression, (3) First prize in the clinical category in the Canadian

Urological Association prize essay contest for his submission The V89L polymorphism of the type-2, 5-alpha reductase enzyme gene (SRD5A2) predicts prostate cancer development and progression , (4) the Physicians Services Incorporated Foundation resident research grant for his project entitled Serum IGF-1 levels and prostate cancer risk, and (5) the Canadian Uro-Oncology Group Zeneca Award.

Dr. G. Capolicchio, Fellow, The Hospital for Sick Children, was awarded an Association for Fertility and Uro Dynamics one year MD scholarship for the project Stretch induced activation of a local renin-angiotensin system (RAS) promotes bladder fibrosis through the receptor for hyaluronic acid (RGAMM) .

Dr. Pramod Reddy, Fellow, The Hospital for Sick Children, was awarded the Restracom grant from the Research Institute at The Hospital for Sick Children and a grant-on-aid from the Northeastern Section of the American Urological Association (Association of Fertility and Uro Dynamics Award), and second prize in the 1999 The Hospital for Sick Children Surgical Services Clinical Research Contest.

Dr. Robert Lai, Fellow, Toronto Western Hospital, won the Fernando Valentine Scholarship from the New York Academy of Medicine and an Ontario Neurotrauma Grant for the project entitled Use of intravesical vanilloid receptor antagonists or sacral nerve root electrical neuromodulation in the treatment of the neurogenic bladder following spinal cord injury .

Many presentations were made by residents at national and international meetings.

Continuing Medical Education

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 5-6, 1999.

The Conference in Prostate Cancer (ICPC) was held again at Whistler under the direction of Dr. John Trachtenberg and is planned again for 2000.

Dr. Ron Kodama was appointed Chair of the Canadian Urological Association Maintenance of Competence Committee.

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. Drs. Wooster and Szalay, received the J.L. Provan Education Award from the Canadian Society of Vascular Surgery. Dr. Lindsay received the IMPRA/Bard Award from the Canadian Society of Vascular Surgery. Dr. Johnston continues as Editor-in-Chief of the Journal of Vascular Surgery and the R. Fraser Elliott Chair in Vascular Surgery. He was the Sir Edwin Tooth Visiting Professor to the University of Queensland.

Research

Dr. Rubin continues his study of the role of phospholipase A2 in human neutrophils with grant support from the Canadian Heart and Stroke Foundation. Dr. Kucey, with Dr. Tu, is funded by a grant from the Canadian Heart and Stroke Foundation, to evaluate carotid endarterectomy in the community. Dr. Lindsay received a new grant from the Physicians Services Incorporated Foundation to continue his studies of the mechanism of remote organ injury following repair of ruptured aortic aneurysms. Dr. Kalman is a co-investigator on a grant from the Medical Research Council of Canada with Dr. Wright, to study the role of MRA for evaluating peripheral arterial occlusive disease. With Dr. Irvine and others, and ongoing grant support from the Canadian Heart and Stroke Foundation, Dr. Kalman is determining the efficacy of interventions in smoke cessation. Dr. Maggisano continues his Canadian Heart and Stroke Foundation grant with a collaborative group to compare the accuracy of alternative imaging modalities for diagnosing carotid stenosis. Dr. Johnston has a five year Medical Research Council of Canada grant and a Canadian Heart and Stroke Foundation grant to support his basic research programs with Professors Richard Cobbold and Matadial Ojha (Biomedical Engineering) in Doppler ultrasound and hemodynamics studies.

Education

Dr. Lossing's core lectures in vascular surgery continue to be very highly evaluated. Dr. Kalman organized the Third 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. He also chairs the Vascular Surgery Residency Committee and is Director of Medical Education at St. Joseph s Health Centre.

Administration

Dr. Walker has assumed the position of Vice-President of the Toronto General Hospital. Dr. Ameli continues in his role as the Chair of Continuing Medical Education for the Department of Surgery. Dr. Wooster is the secretary of the Canadian Society of Vascular Surgery. Dr. Kalman is President of the Canadian Society of Vascular Surgery. Dr. Lindsay is President-elect of the Peripheral Vascular Surgery Society. Dr. Wooster was appointed to the Vascular Advisory Committee of the American College of Surgeons. Dr. Johnston is Chair of the Clinician Scientist Committee at the Medical Research Council of Canada. Dr. Tanner is Chair of the Specialists Coalition of the Cardiovascular Tariff Committee for the Ontario Medical Association.

DIVISION OF BIOMEDICAL COMMUNICATIONS

Dr. Linda Wilson-Pauwels, Chair

This year, the Division of Biomedical Communications program was re-accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP). The external reviewers found strong administrative support for the program as evidenced by the high regard in which both faculty and students are held by the Department of Surgery, the School of Graduate Studies, and the Institute of Medical Science. Other strengths of the program were found in the comprehensive basic science courses, the physical facility and its location to teaching hospitals and the Grant s Museum. The evaluators commented on the well-planned courses, the availability of technology, and the academic qualifications and enthusiasm of students entering the program.

The Program Director was praised for her energetic leadership and vision in elevating the Division of Biomedical Communications to graduate status: Her leadership style creates a sense of community that is reflected in the interaction between students, faculty and, indeed, the program s interaction with the whole University . The reviewers commented on the congenial atmosphere which allows the students to freely and informally approach any faculty member within the program or the University for advice and guidance. The evaluators found that the program was in compliance with the essentials required for a graduate program in medical illustration, and the Biomedical Communications program was awarded a five year re-accreditation.

A greater number of students applied to the MScBMC program for the 1999-2000 academic year, and their qualifications were found to be higher than in previous years. Six out of the eight selected students will receive an Entrance University of Toronto Open from the Institute of Medical Science worth \$5,100 for achieving a cumulative grade point average (GPA) of A- or above in their undergraduate degrees.

Biomedical Communications faculty focused on refining and expanding the MScBMC program this year. A proposal to offer a combined program with Sheridan College s Postgraduate Computer Animation Program is underway. Students will be given the opportunity to use advanced hardware and software, as well as work with additional faculty who have expertise in 3-D animation. This unique partnership will enhance the professional skills of

the MScBMC graduates and will give the Biomedical Communications program international recognition. It is anticipated that increasing partnerships with industry for studentships, infrastructure, and faculty support will flourish with the success of the combined program. Our goal for next year will be the implementation of this exciting initiative.

SURGICAL ALUMNI ASSOCIATION

Dr. Bernard Langer, President

The continued generous support of our alumni and staff has allowed the University of Toronto Surgical Alumni Association to reach a milestone in 1998. Total cumulative donations including matching funds have passed the one million dollar mark. This includes the Surgical Scientist Program Fellowship Endowment which has reached \$350,000 and the John Provan Education Fellowship Endowment which now stands at \$117,000. In addition, a total of \$193,000 in pledges over the next four years have been received so far, most of which are eligible for matching either by the Province of Ontario or the University of Toronto.

The major beneficiaries of the alumni funds have been the residents in our Surgical Scientist Program. A total of 58 awards have been made since our modest beginnings in 1984. In 1998-99, thirteen trainees have received support from the alumni fund. They are Steve Borenstein, Robin Boushey, Andrew Campbell, Steve Casha, Rebecca Gladdy, Sevan Hopyan, Laz Klein, Geeta Lal, Jennifer MacMillan, Zvi Margaliot, Robert Nam, Stacey O Blenes, and Eugene Wai. In addition, Dr. Peter Dirks in the Division of Neurosurgery at The Hospital for Sick Children, became the second recipient of the Surgical Alumni Scholarship for new faculty members this year.

The Surgical Alumni Newsletter continues to be published twice yearly and goes out to over 1,800 of our former trainees. We see many of them at the annual University of Toronto alumni reception which has now become a Canadian Departments of Surgery reception at the American College of Surgeons Clinical Congress. This reception is now supported by the Royal College of Physicians and Surgeons of Canada and has become an annual meeting place for Canadian surgeons and their friends from around the world.

SURGICAL ONCOLOGY

Dr. Robert Bell, Acting Chair

Departmental Surgical Oncology Committee

The Surgical Oncology Fellowship Program in General Surgery entered its second year with considerable enthusiasm and success. Drs. Carol Swallow, Sherif Hanna, Lorne Rotstein and David McCready are to be congratulated for providing mentorship and training to the fellowship candidates as well as providing a collaborative framework for development of the curriculum. Dr. Swallow continues in her role as Program Director and continues to develop the curriculum, which extends to other surgical oncology fellowships and to the radiation oncology fellowship and residency programs.

In the past year, the activities of the Provincial Advisory Committee for Surgical Oncology have become more intensive, as have organizational efforts at the regional level. Dr. Denny DePetrillo is the Chair of the Provincial Advisory Committee for Surgical Oncology and reports on provincial surgical oncology activities to Dr. Shumak, Director of Cancer Care Ontario. The Provincial Advisory Committee for Surgical Oncology is responsible for developing referral and surgical care networks within the province, as well as generally improving surgical oncology care throughout the province. To-date, a web site has been developed for information sharing with both a professional and public audience, as well as providing a roster of surgical oncologists practicing in cancer centres across the province. One of the first projects accomplished by the Provincial Advisory Committee for Surgical Oncology was to advise Cancer Care Ontario on the findings of the Institute for Clinical Evaluative Sciences study testing the relationship between patient volumes and early mortality in the surgical management of pancreas cancer. This study identified considerable variation in patient outcome that seemed to be at least partly related to volumes of patients treated at the institution. The Provincial Advisory Committee for Surgical Oncology initiated a subcommittee to review these results and recommend action. As a result of this process, Chiefs of Surgery and hospital Chief Executive officers across the province are being advised of both the overall findings of the study, and how their hospital ranked with respect to other hospitals. As well, the hospitals will be advised what services should be available in the hospitals that undertake hepatobiliary surgery. The results of the Pancreas Task Force Report and the subsequent recommendations for implementation were released through the Regional

Councils of Cancer Care Ontario, each of which has a head of surgical oncology. Dr. David McCready fills this role for our central east region. Together with the heads of surgical oncology for the two academic cancer centres and the Chief of Surgical Oncology at Credit Valley and Durham Cancer Centres (due to open in 2002), Dr. McCready has the responsibility for developing surgical oncology services within the Toronto region. This task will extend to implementation of cancer treatment and referral networks at the local level, as well as developing provider education to both surgeons and their referring physicians. Dr. McCready is planning the first of many CCOR courses for the Fall of 1999.

Finally, surgical oncology took a major step forward at this University in January 1999. With the firm support of Drs. Alan Hudson, Paul Walker and Michael Baker, 22 surgical oncologists moved into Princess Margaret Hospital to carry on practice in a multi-disciplinary cancer care centre. This is a significant change for surgical practice in Toronto and the surgeons who undertook this move are to be commended for their vision in attempting to provide consultation and care in a patient centered environment. The inevitable difficulties associated with a move of this magnitude are still being worked out. However, the move of surgical oncology to the Cancer Centre offers tremendous promise for our patient care, research and education programs.

CONTINUING MEDICAL EDUCATION

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

Continuing medical education continues to be a very active part of the academic activities of the Department of Surgery. Twenty courses were sponsored or co-sponsored by the Department of Surgery. Surgical courses were offered in orthopaedic surgery, plastic surgery, neurosurgery, vascular surgery, critical care symposium, medico-legal course for surgeons, cardiac disease, general surgery, thoracic surgery, and trauma. There was also a specific Scientific Research Day in Cardiovascular Disease which was sponsored.

With the decision of the Royal College of Physicians and Surgeons of Canada to implement mandatory continuing medical education in the early part of the next millennium, there is going to be an increase in the need for continuing medical education activities, not only of the lecture type, but also ones that are far more interactive and particularly those involving new technical skills. The ability to collect continuing medical education credits will be essential and the ability to offer remedial training for surgeons will also be increasingly required.

The Continuing Medical Education office in the Faculty of Medicine continues to be supportive and proactive. Sandra Leith, Jane Tipping and Dr. Dave Davis continue to be helpful and stimulating with the objective of improving the calibre of the continuing medical education activities offered by the Department of Surgery, and also to improve the learning opportunities for surgeons.

THE HOSPITAL FOR SICK CHILDREN

Surgeon-in-Chief - Dr. J.H. Wedge

HEADS OF DIVISION

Dr. W.G. Williams - Cardiac Surgery
Dr. R. Humphreys - General Surgery (*Acting*)
Dr. R. Humphreys - Neurosurgery
Dr. W. Cole - Orthopaedic Surgery
Dr. R.M. Zuker - Plastic Surgery
Dr. A. Khoury - Urology

The Department of Surgery has been the beneficiary of four endowed Chairs realized through The Hospital for Sick Children Campaign which has emphasized funding for research under the banner Help Make Sick Kids Better . These are the Robert B. Salter Chair in Pediatric Surgical Research, the Robert Filler Chair in Pediatric Surgery, the Shoppers Drug Mart-Hoffman Chair in Neurosurgery and the Newcourt Chair in Congenital Cardiac Surgery. Dr. Jack Langer has been appointed Head of the Division of Pediatric General Surgery and will be the inaugural holder of the Filler Chair. Dr. James Wright has been appointed to the Robert B. Salter Chair in Pediatric Surgical Research and Dr. James Rutka to the Shoppers Drug Mart-Hoffman Chair in Neurosurgery. Dr. Rutka's tenure in the Hoffman Chair will be brief because he has been appointed Chair of the University Division of Neurosurgery, effective July 1, 1999 and will, therefore, occupy the University of Toronto Dan Family Chair in Neurosurgery. A search will commence in the near future for a new occupant for the Shoppers Drug Mart-Hoffman Chair in Neurosurgery. Also the search for the Newcourt Chair in Congenital Cardiac Surgery will commence shortly. I predict that these endowed Chairs will result in a legacy of innovation, creation of new knowledge and international recognition for our surgical programs.

Productivity in research continues to escalate with the Department now holding over two million dollars of external peer reviewed funding. The Division of Orthopaedic Surgery deserves special mention for its successful research programs with the grant capture and publications by Drs. Cole,

Wright and Alman being truly spectacular. The support of The Hospital for Sick Children Research Institute by the Hospital Foundation deserves acknowledgment as we bring in a new era of close co-operation and collaboration between basic scientists and clinical scientists. The Arthur and Sonia Labatt Brain Tumor Research Centre, under the direction of Dr. James Rutka, is leading internationally in the development of novel approaches in looking at the most common and most lethal of solid organ tumors in children. The acquisition, through a highly competitive process of the Children's Heart Surgeons Society database by our Division of Cardiac Surgery will place us at the forefront of pediatric cardiac surgery. This rich source of information from the world's top pediatric cardiac surgical centres will generate many studies that require a critical mass layer than is available in any one unit.

Our post-residency subspecialty fellowship programs are arguably the most highly developed in the world. We continue to attract the best and brightest from Canadian, American and international centres who will further our goal of dissemination of new knowledge worldwide. I continually marvel at the contribution of these individuals through their infusion of new ideas and better approaches to clinical problems from which we and our patients are the beneficiary.

of particular note this year are the retirements of Dr. Mercer Rang of the Division of Orthopaedic Surgery and Dr. Hugh Thomson of the Division of Plastic Surgery. Both these individuals are international leaders in their areas of clinical expertise. Dr. Rang was honoured by a meeting in Toronto of the Salter Society, which consists of numerous former fellows of the Division from around the world. Dr. Rang gave an inspiring address as the Robert B. Salter annual lecturer in the Division. Dr. Thomson, who is an international authority on cleft lip and palate, has received numerous awards and recognition for his long-term contribution to the field.

Recent appointments, some of whom will not be in place until the new academic year include: Dr. Jack Langer as Head of the Division of General Surgery, Dr. Chris Forrest, who has moved from the Sunnybrook and Women's College Health Sciences Centre to be the Director of the Craniofacial Program at The Hospital for Sick Children, and Dr. David Grant from the University of Western Ontario, who will be Director of GI Transplantation within a pediatric multi-organ transplant program at the Hospital. Dr. Langer was a former fellow in pediatric surgery at The

Hospital for Sick Children and has been on the faculty at McMaster University and Washington University School of Medicine in St. Louis, prior to returning to our Hospital. Dr. Andrew Howard, also a former Hospital for Sick Children fellow, will join the Division of Orthopaedic Surgery from the University of Ottawa and the Children's Hospital of Eastern Ontario to replace Dr. Rang.

From the preceding, it is obvious that I take great pride in the accomplishments of all of our surgical divisions. These have been validated by external reviewers, visiting professors and external agencies. Major children research hospitals in the United States see us as a development site for future leaders in international pediatric surgery and related specialties.

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

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INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Williams WG: Congenital Heart Surgeons Society, Chicago, Illinois, September 1998. Current plans for CHSS multi-institutional studies and database.

Williams WG: Contemporary Cardiothoracic Surgery, Washington University School of Medicine, St. Louis, Missouri, October 1998. Long-term outcomes in patients following repair of tetralogy of Fallot.

Williams WG: International Congress of Cardiovascular and Thoracic Surgery, Karachi, Pakistan, December 1998. State of the art.

Williams WG: American Association of Thoracic Surgeons, New Orleans, Louisiana, April 1999. Discussion: Five to fifteen year follow-up of fresh autologous pericardial valved conduits by Schlichter AJ.

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

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 Foundation (\$6,000 1998 - 1999).

Double-blind placebo controlled study of cylexin: A multi-institutional trial. *Van Arsdell GS*: Cytel (\$60,000 1998 - 1999).

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

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

The response of the newborn heart to chronic oxygen stress. *Wittnich C*: Heart and Stroke Foundation (\$159,391 1997 - 1999).

DIVISION OF GENERAL SURGERY

Dr. S.H. Ein - Associate Professor
Dr. A. Fecteau - Assistant Professor
Dr. R.M. Filler - Professor
Dr. T. Gerstle - Assistant Professor
Dr. P.C.W. Kim - Assistant Professor

PUBLICATIONS

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Obatake M, Kimmel SG, Kushida MM, Clarke ID, Kim PCW: A new small animal model demonstrates that T-lymphocytes are essential for rejection of vascularized cardiac concordant xenografts. *Transplantation* 1998 December: 65(12): pp S123.

Obatake M, Kushida M, Clarke I, Kim PCW: In vivo requirements for natural killer (NK) and B cells in concordant cardiac xenograft rejection. *Transplantation* 1999 April: 67(7): pp S258.

Obatake M, Kushida M, Kimmel SG, Clarke ID, Kim PCW: T-cells are necessary and critical for the xenograft rejection in new concordant cardiac xenotransplant model. *Transplantation* 1999 June: 67(11): pp 1.

Sander AD, Ein SH, Connolly B, Daneman A, Filler RM: Unsuccessful air-enema reduction of intussusception: Is a second attempt worthwhile? *Journal of Pediatric Surgery* 1999 May: 15: pp 214-216.

Sandler AD, Evans D, Ein SH: To tube or not to tube: Do infants and children need post-laparotomy gastric decompression? *Pediatric Surgery International* 1998 October: 13: pp 411-413.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Kim PCW: Group for Transplantation, Medical Research Council of Canada, Toronto, Ontario, April 1999. Mechanisms of xenograft rejection.

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 - Associate Professor

PUBLICATIONS

Alshail E, Rutka JT, Drake JM, Hoffman HJ, Humphreys RP, Phillips J, Cusimano M, Forte V, Papsin B, Holowka S: Utility of frameless stereotaxy in the resection of skull base and basal cerebral lesions in children. *Skull Base Surgery* 1998 July: 8: pp 29-38.

Arab S, Lingwood C, Murakami M, Dirks PB, Hubbard SL, Rutka JT: Verotoxins inhibit the growth of and induce apoptosis in human astrocytomas. *Journal of Neuro-Oncology* 1998 November: 40: pp 137-150.

Dirks PB, Rutka JT: The neurogenetic basis of pediatric neurosurgical conditions. In: *Principles and Practice of Pediatric Neurosurgery* (Albright AL, Pollock IF, Adelson PD, eds). Thieme Publications, New York 1999: pp 23-47.

Dirks PB, Rutka JT, Hubbard SL, Mondal S, Hamel PA: The E2F family proteins induce distinct cell cycle regulatory factors in p16-arrested U343 astrocytoma cells. *Oncogene* 1998 July: 17: pp 867-876.

Drake JM, Kestle JRW, Milner R, Cinalli G, Boop F, Piatt J Jr, Haines S, Schiff J, Cochrane DD, Steinbok P, MacNeil N: Randomized trial of cerebrospinal fluid shunt design in pediatric hydrocephalus. *Neurosurgery* 1998 August: 43: pp 294-305.

Griffiths PD, Blaser S, Armstrong D, Chuang S, Humphreys RP, Harwood-Nash D: Cerebellar arteriovenous malformations in children. *Pediatric Neuroradiology* 1998 July: 40: pp 324-331.

Hinek A, Jung S, Rutka JT: Cell surface aggregation of elastin receptor molecules caused by suramin amplified signals leading to proliferation of human glioma cells. *Acta Neuropathologica* 1999 March: 97: pp 399-407.

Hoving E, Blaser S, Kelly R, Rutka JT: Anatomical and embryological considerations in the repair of a large vertex cephalocele: Case report. *Journal of Neurosurgery* 1999 March: 90: pp 537-541.

Humphreys RP: Vascular malformations: Surgical treatment. In: *Principles and Practice of Pediatric Neurosurgery* (Albright AL, Pollack IF, Adelson PD, eds). Thieme Publications, New York 1999: pp 1003-1016.

Humphreys RP: Surgery of the midline pediatric cerebral glioma. In: *Surgery of Gliomas* (Shibata S, ed). Nagasaki Publications, Japan 1998: pp 169-179.

Jay V, Edwards V, Hoving E, Rutka J, Becker L, Zielenska M, Teshima I: Central neurocytoma: Morphological, flow cytometric, polymerase chain reaction, fluorescence in situ hybridization, and karyotypic analyses. *Journal of Neurosurgery* 1999 February: 90: pp 348-354.

Jay V, Edwards V, Rutka J: Cerebellar pathology in tuberous sclerosis. *Ultrastructural Pathology* 1998 October: 22: pp 331-339.

Jung S, Hinek A, Tsugu A, Hubbard SL, Ackerley C, Becker LE, Rutka JT: Astrocytoma cell interaction with elastin substrates: Implications for astrocytoma invasive potential. *GLIA* 1999 January: 25: pp 179-187.

Rutka JT: Book review: Gene therapy for neurological disorders and brain tumors. *Canadian Journal of Neurological Sciences* 1998 November: 25: pp 347-348.

Rutka JT, Hubbard SL, Murakami M, Dirks PB, Ackerley C, Becker LE: Characterization of glial filament: Cytoskeletal interactions in human astrocytomas: An immuno-ultrastructural analysis. *European Journal of Cell Biology* 1998 September: 76: pp 279-287.

Rutka JT, Muller M, Hubbard SL, Dirks PB, Becker LE: Astrocytoma adhesion to extracellular matrix: Functional significance of integrin and focal adhesion kinase expression. *Journal of Neuropathology and Experimental Neurology* 1999 February; 58: pp 198-209.

Rutka JT, Tsugu A, Jung S, Dirks P, Kurimoto M: Recent developments in the molecular biology of human brain tumors. In: *Current Techniques in Neurosurgery* (Salzman M, Awad IA, Kalfas IH, Wyler AR, eds). Springer-Verlag, New York 1998: pp 191-205.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Dirks PB: International Symposium on Spina Bifida, Verona, Italy, May 1999. Chiari II malformations: A ten year experience at The Hospital for Sick Children.

Humphreys RP: Postgraduate Course, European Society for Pediatric Neurosurgery, Aalborg, Denmark, May 1999. (1) Posterior fossa cysts, (2) Solve a case, (3) Neurosurgical quiz, (4) Moderator: Trauma.

Humphreys RP: American Association of Neurological Surgeons, New Orleans, Louisiana, April 1999. Pediatric brain tumors.

Humphreys RP: European Society for Pediatric Neurosurgery, Marseille, France, November 1998. (1) Moderator: Vascular diseases, (2) Pediatric AVMs: Issues in the 90 s.

Humphreys RP: Spina Bifida and Hydrocephalus Association of Ontario, Toronto, Ontario, August 1998. The quest for solutions: Neurosurgical update.

Rutka JT: Stanford University, Palo Alto, California, January 1999. Current concepts in pediatric epilepsy surgery.

Rutka JT: Pediatric Section in Neurosurgery, Indianapolis, Indiana, December 1998. Ependymoma in children.

Rutka JT: Congress of Neurological Surgeons, Seattle, Washington, October 1998. Craniopharyngioma.

Rutka JT: Pediatric Oncology Group of Ontario, Toronto, Ontario, September 1998. Surgical considerations in medulloblastoma.

Rutka JT: Visiting Professor, Alberta Heritage Medical Research/ University of Calgary, Calgary, Alberta, September 1998. (1) Cell cycle control in human astrocytomas, (2) Medulloblastoma: A recent appraisal.

Rutka JT: L'hôpital Enfants Malades, Paris, France, August 1998. Role of multiple subpial transections in refractory epilepsy in children.

Rutka JT: Candlelighters International Conference, Montreal, Quebec, July 1998. Recent advances in the management of the child with a brain tumor.

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 regulation astrocytoma tumorigenicity. *Rutka JT*: Medical Research Council of Canada (\$70,000 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).

Diagnosis and treatment of CSF shunt obstruction with doppler ultrasound. *Drake JM*, Cobbold RSC: Johnson and Johnson (\$30,000 1997 - 1999).

Endoscopic shunt insertion trial. *Kestle J*, Cochrane D, Milner R, Drake J: The Hospital for Sick Children Foundation (\$129,714 1996 - 1998).

Endoscopic shunt insertion trial. *Kestle J*, Cochrane D, Milner R, Drake J: Medical Research Council of Canada (\$149,360 1997 - 1999).

Intermediate filament-induced alterations in astrocytoma morphology and proliferation. *Rutka JT*, Dirks PB, Becker LE: Medical Research Council of Canada (\$336,000 1995 - 2004).

Intra-tumoral therapy with verotoxin for recurrent malignant astrocytoma in children and adults: A pilot innovative therapy trial. *Rutka JT*, Baruchel S, Lingwood C: National Brain Tumor Foundation (\$20,000 1998 - 1999).

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

Regulation of cerebral salt balance in head injury in children. *Rutka JT*, Bohn D: Physicians Services Incorporated Foundation (\$120,000 1997 - 1999).

Regulation of NMDA channels in human epilepsy. *Salter M*, Rutka JT: The Hospital for Sick Children Foundation (\$40,000 1997 - 1999).

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

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

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).

HONOURS RECEIVED

Dirks PB: Surgical Alumni Scholar in Surgical Science, Department of Surgery, University of Toronto, July 1998.

Rutka JT: Career Scientist Award, Medical Research Council of Canada, March 1999.

DIVISION OF ORTHOPAEDIC SURGERY

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

PUBLICATIONS

Cole WG: Focal fibrocartilaginous dysplasia. In: *The Immature Knee* (de Pablos J, ed). Biblio STM, Madrid 1998: pp 109-112.

Cole WG: Genetics and orthopaedics. *Journal of Pediatric Orthopaedics* 1999 May: 19: pp 281-282.

Cole WG: Genes and orthopaedics. *Journal of Bone and Joint Surgery* 1999 March: 81B: pp 190-192.

Deeney VF, Kaye JJ, Geary SP, Cole WG: Pseudo-Volkman's contracture due to tethering of flexor digitorum profundus to fractures of the ulna in children. *Journal of Pediatric Orthopaedics* 1998 July: 18: pp 437-440.

Freund D, Lave J, Clancy C, Hawker GA, Hasselblad V, Keller R, Schneider E, Wright JG: Patient outcomes research team: Contribution to outcomes and effectiveness research. *Annals of Rev Public Health* 1999 January: 20: pp 337-359.

Giunta C, Superti-Furga A, Spranger S, Cole WG, Steinmann B: Ehlers-Danlos syndrome type VII: Clinical and molecular aspects. *Journal of Bone and Joint Surgery* 1999 March: 81A: pp 225-238.

Hecht JT, Deere M, Putman E, Cole W, Vertel B, Chen H, Lawler J: Characterization of cartilage oligomeric matrix protein (COMP) in human normal and pseudoachondroplasia musculoskeletal tissues. *Matrix* 1998 August; 17: pp 269-278.

Li C, Bapat B, Alman BA: APC truncation regulates proliferation through its beta-catenin regulatory function in aggressive fibromatosis (desmoid tumor). *American Journal of Pathology* 1998 September; 153: pp 709-714.

Marx RG, Bombardier C, Hogg-Johnson S, Wright JG: Clinimetric and psychometric strategies for development of a health measurement scale. *Journal of Clinical Epidemiology* 1998 October; 52(2): pp 105-111.

Marx RG, Bombardier C, Wright JG: What do we know about the reliability and validity of physical examination of the upper extremity? *Journal of Hand Surgery* 1999 January; 24A(1): pp 185-193.

Marx RG, Hudak P, Bombardier C, Graham B, Goldsmith C, Wright JG: The reliability of physical examination for carpal tunnel syndrome. *Journal of Hand Surgery* 1998 August; 23B(4): pp 449-502.

Marx RG, Wright JG: Slipped capital femoral epiphysis following septic arthritis of the hip in an adolescent: Case report. *Canadian Journal of Surgery* 1999 April; 42(2): pp 145-148.

McGrory J, Cole WG: Alternative splicing of exon 37 of FBN1 deletes part of an 'eight-cysteine' domain resulting in the Marfan syndrome. *Clinical Genetics* 1999 April; 55: pp 118-121.

McIntosh I, Dreyer SD, Clough MV, Kopetka J, Eyaid WM, Roig CM, Montgomery T, Ala-Mello S, Kaitila I, Winterpacht A, Zabel B, Frydman M, Cole WG, Francomano CA, Lee B: Mutation analysis of LMXIB gene in nail patella syndrome patients. *American Journal of Human Genetics* 1998 December; 63: pp 1651-1658.

Norton E, Garfinkel SA, McQuay LJ, Heck D, Wright JG, Dittus R, Lubitz RM: The effect of hospital volume on the in-hospital complication rate in knee replacement patients. *Health Services Research* 1998 December; 33(5): pp 1191-1210.

Templeton PA, Wright JG: Femoral shaft fractures: North American and European perspectives. *Current Orthopaedics* 1998 July: 12(3): pp 153-158.

Wai E, Wright JG: Evidence-based surgery. In: *Crucial Controversies in Surgery* (Schein M, Wise L, eds). Lippincott-Raven Publishers, Philadelphia 1999: pp 1-8.

Young NL, Wright JG, Lam TP, Rajaratnam K, Stephens D, Wedge JH: Windswept hip deformity in spastic quadriplegic cerebral palsy. *Pediatric Physical Therapy* 1998 December: 10(3): pp 94-100.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Alman BA: Melbourne Children's Hospital, Melbourne, Australia, March 1999. (1) Back pain in children, (2) What does normal plasia teach us about neoplasia?

Alman BA: Yale University School of Medicine, New Haven, Connecticut, December 1998. What does normal plasia teach us about neoplasia?

Alman BA: Leidse Genetische Colloquia, University of Leiden, Leiden, The Netherlands, October 1998. Developmental pathways in musculoskeletal neoplasia: Wingless hedgehog, desmoids, and chondrosarcoma.

Alman BA: University of Leuven, Leuven, Belgium, October 1998. Developmental pathways in musculoskeletal neoplasia: Wingless hedgehog, desmoids, and chondrosarcoma.

Alman BA: University of Pennsylvania, Philadelphia, Pennsylvania, July 1998. Aggressive fibromatosis.

Cole WG: Societe Internationale de Chirurgie Orthopedique et de Traumatologie, Sydney, Australia, April 1999. (1) Current trends lecture: Gene therapy and orthopaedic surgery, (2) Femoral fractures in children, (3) Chair: External fixation of femoral shaft fractures in children, (4) Pediatric nursing.

Cole WG: Distinguished Lecture Series, Hospital for Special Surgery, New York, New York, April 1999. Molecular pathology of skeletal dysplasias.

Cole WG: Visiting Professor, Shriners Research Forum, Tampa, Florida, March 1999. The molecular pathology of skeletal dysplasias.

Cole WG: Shriners Hospital/McGill University, Montreal, Quebec, October 1998. Orthopaedic management of osteogenesis imperfecta.

Rang MC: International Pediatric Orthopaedic Symposium, Chicago, Illinois, May 1999. (1) Goals in cerebral palsy, (2) Hand surgery in cerebral palsy, (3) Monteggia fracture dislocation, (4) Occult elbow fracture, (5) Common elbow fractures.

Rang MC: Visiting Professor, Carolinas Medical Center, Charlotte, North Carolina, March 1999. What's new in children's fractures.

Rang MC: University of West Indies, Mona, Jamaica, February 1999. Twenty-four hour resident teaching course on all aspects of pediatric orthopaedics.

Rang MC: Trainee Conference, British Orthopaedic Association, York, England, January 1999. Alan Apley memorial lecture.

Rang MC: Gulf Orthopaedic Association, Dohar, Qatar, December 1998. (1) The history of orthopaedics, (2) What's new in Perthes' disease, (3) Arthrogyposis, (4) More on flexible nails.

Rang MC: Royal Society of Medicine, London, England, October 1998. (1) Short muscle disease, (2) Cerebral palsy scoliosis, (3) Complications of cerebral palsy and how to avoid them, (4) Short muscles and spastic mice.

Wedge JH: Royal College Lecturer, Association d'Orthopedie du Quebec/Royal College of Physicians and Surgeons of Canada, Mont Tremblant, Quebec, October 1998. (1) Legg-Calve-Perthes: Poor prognostic factors and general guidelines of treatment, (2) Hip fusion in adolescents: In the long run, is it a good procedure?

Wright JG: Moebius Syndrome Conference, Mississauga, Ontario, July 1998. Panelist.

Wright JG: American Academy of Orthopaedic Surgeons, Chicago, Illinois, July 1998. (1) Workshop leader: Randomized clinical trials, (2) Workshop leader: What tools are available and how to choose one, (3) Workshop leader: When and why do surgeons change what they do?

Wright JG: Spina Bifida and Hydrocephalus Association of Ontario, Toronto, Ontario, August 1998. Workshop: Musculoskeletal issues for children with spina bifida.

Wright JG: Visiting Professor, Brown University, Providence, Rhode Island, September 1998. Outcomes research: What have we learned and what's next?

Wright JG: Five Counties Treatment Centre, Peterborough, Ontario, October 1998. The treatment of hip dislocation in spina bifida.

Wright JG: Visiting Professor, Washington University School of Medicine, St. Louis, Missouri, January 1999. Outcomes research: What have we learned and what's next?

Wright JG: Visiting Professor, St. Boniface General Hospital/ University of Winnipeg, Winnipeg, Manitoba, March 1999. (1) Outcomes research: What have we learned and what's next?, (2) Designing clinical research.

Wright JG: Ste-Justine Pediatric Orthopaedic Review Course, Montreal, Quebec, April 1999. (1) Femoral fractures from newborn to adolescents, (2) Supracondylar fractures with nerve and vessel injury, (3) Management of recurrent clubfeet.

Wright JG: Ontario Hospital Association, Toronto, Ontario, May 1999. (1) Assigning patient priorities: Who gets treated first (E.R. surgical waiting lists and bed shortages), (2) Evaluation of new techniques and alternative therapies.

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

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

An outcomes questionnaire for use in idiopathic scoliosis. *Lonstein J*, Alman BA: Scoliosis Research Society (\$50,000 1995 - 1998).

Analysis of factors associated with recurrence of clubfoot deformity. *Wright JG*, Templeton P: The Hospital for Sick Children Foundation (\$2,000 1998 - 1999).

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).

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).

Determinants of physical disability in spina bifida children following scoliosis spinal surgery. *Wai E, Wright JG*: Easter Seals Research Institute (\$33,561 1998 - 1999).

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

Developmental signalling 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 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).

Exploring the relationship between patient satisfaction with hand surgery and clinical outcome. *Hudak P, Wright JG, McKeever P*: Physical Medicine Research Foundation (\$11,500 1997 - 1999).

Functional outcome in scoliosis surgery in spina bifida: Does achievement of surgical goals result in achievement of treatment goals? *Wai E, Wright JG*: Easter Seals Society (\$30,510 1997 - 1999).

Functional outcome in scoliosis surgery in spina bifida: Does achievement of surgical goals result in achievement of treatment goals? *Wai E, Wright JG*: The Hospital for Sick Children Foundation (\$1,941 1997 - 1998).

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

Molecular pathology of Ehlers-Danlos syndrome and chondrodysplasias. *Cole WG*: Medical Research Council of Canada (\$760,331 1996 - 1999).

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

Randomized trial comparing two spinal implant systems for idiopathic scoliosis. *Alman BA, Cole WG, Hedden DM, Wright JG*: Medical Research Council of Canada (\$150,000 1997 - 2000).

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

The molecular pathology of aggressive fibromatosis: Clues into adenomatous polyposis coli (APC) gene function. *Alman BA*: Connaught Foundation (\$15,000 1997 - 1999).

The relative responsiveness of three functional disability scales in patients with musculoskeletal disorders. *Wright JG, Pencharz J*: Easter Seals Research Institute (\$3,000 1998).

Treating fibrosis by blocking cyclooxygenase-two. *Alman BA*: Canadian Orthopaedic Foundation (\$15,000 1998 - 1999).

HONOURS RECEIVED

Rang MC: Apley Gold Medal, British Orthopaedic Association, March 1999.

Wright JG: Career Scientist Award, Medical Research Council of Canada, July 1998.

Wright JG: Robert B. Salter Chair in Pediatric Surgical Research, The Hospital for Sick Children Foundation, April 1999.

DIVISION OF PLASTIC SURGERY

Dr. H.M. Clarke - Associate 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

Becker LM, Zuker RM: Vascularized fibular epiphyseal transplantation for limb salvage following bone tumor excision. *Canadian Journal of Plastic Surgery* 1999 March: 7(2): pp 65-73.

Capek L, Clarke HM, Curtis CG: Neuroma-in-continuity resection: Early outcome in obstetrical brachial plexus palsy. *Plastic and Reconstructive Surgery* 1998 September: 120(5): pp 1555-1562.

Farkas LG, Phillips JH, Katic M: Anthropometric anatomical and morphological nose widths in Canadian caucasian adults. *Canadian Journal of Plastic Surgery* 1998 October: 6(3): pp 149-151.

Fialkov JA, Antonyshyn OM, Forrest CR, Farb R: Morphological and volumetric analysis of post-traumatic enophthalmos using combined imaging modalities. *Proceedings, Seventh International Congress of the International Society of Craniofacial Surgery* (Whitaker L, ed). Monduzzi Editore, Bologna 1998: pp 221-223.

Forrest CR, Khairallah E, Kuzon W: Intra-ocular and intra-orbital compartment pressure changes following orbital bone grafting: A clinical and laboratory study. *Plastic Reconstructive Surgery* 1999 June: 104: pp 48-54.

Forrest CR, Pang CY: Discussion: Ischemic pre-conditioning improves the survival of skin and myocutaneous flaps in a rat model by Kahir KS, Syed SA, Zink JR, Restifo RJ and Thomson JG. *Plastic Reconstructive Surgery* 1998 July: 102: pp 151-152.

Fraulín FOG, Bahoric A, Harrop AR, Hiruki T, Clarke HM:

Autotransplantation of epithelial cells in the pig via an aerosol vehicle. *Journal of Burn Care and Rehabilitation* 1998 September: 19(4): pp 337-345.

Fraulín FOG, Valnicek SM, Zuker RM: Decreasing the perioperative complications associated with the superior pharyngeal flap operation. *Plastic and Reconstructive Surgery* 1998 July: 102: pp 10-18.

Gur E, Chiodo A, Pang CY, Mendes M, Pritzker KPH, Neligan PC, Shpitzer T, Forrest CR: The vascularized pig fibula bone flap model: Effects of multiple segmental osteotomies on growth and viability. *Plastic Reconstructive Surgery* 1999 April: 103: pp 1436-1450.

Iconomou TG, Zuker RM, Phillips JH: Mandibular reconstruction in children using the vascularized fibula. *Journal of Reconstructive Microsurgery* 1999 February: 15(2): pp 83-90.

Kasrai L, Forrest CR, Hearn TC, Szalai JP: A biomechanical analysis of the orbital-zygomatic complex. *Proceedings, Seventh International Congress of the International Society of Craniofacial Surgery* (Whitaker L, ed). Monduzzi Editore, Bologna 1998: pp 25-26.

Kasrai L, Hearn T, Gur E, Forrest CR: A biomechanical analysis of the orbital-zygomatic complex in human cadavers: Examination of load-sharing and failure patterns following fixation with titanium and bioresorbable plating systems. *Journal of Craniofacial Surgery* 1999 May: 10: pp 237-243.

Pang CY, Zhang J, Xu H, Lipa J, Forrest CR, Neligan PC: Role and mechanism of endothelin-B (ET-B) receptors in mediating ET-1-induced vasoconstriction in pig skin. *American Journal of Physiology* 1998 July: 275: pp R1066.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Clarke HM: International Confederation for Plastic, Reconstructive and Aesthetic Surgery, San Francisco, California, June 1999. Complex reconstruction of the pediatric hand.

Clarke HM: Canadian Society of Plastic Surgeons, Montreal, Quebec, June 1999. (1) Tisseel (fibrin sealant) and nerve repair, (2) Video: Endoscopic sural nerve harvest.

Clarke HM: Brachial Plexus Symposium, Obstetrical and Adult, Los Angeles, California, June 1999. (1) The Toronto experience, (2) Panel: Obstetrical: Case presentation and management.

Clarke HM: Segundo Curso de Cirugia del Plexo Braquial y Nervios Perifericos, Barcelona, Spain, March 1999. Obstetrical brachial plexus palsy clinical examination.

Clarke HM: Workshop on Obstetrical Brachial Plexus Lesions, Heerlen, The Netherlands, November 1998. Video: Endoscopic sural nerve harvest.

Clarke HM: American Society of Plastic and Reconstructive Surgeons, Boston, Massachusetts, October 1998. Complex reconstruction of the pediatric hand.

Forrest CR: Washington University School of Medicine, St. Louis, Missouri, June 1999. Pre-conditioning of skeletal muscle: Current concepts.

Forrest CR: American Society of Plastic and Reconstructive Surgeons, Boston, Massachusetts, October 1998. Course: Application of minimal access and endoscopic techniques in the management of facial fractures.

Phillips JH: American Academy of Pediatrics, San Francisco, California, October 1998. (1) Faculty, (2) Indications for cosmetic facial surgery in adolescents.

Zuker RM: Moebius Syndrome Foundation of Canada, Mississauga, Ontario, July 1998. Presentation of muscle transplantation and results of surgery.

Zuker RM: American Academy of Pediatrics, San Francisco, California, October 1998. (1) Course: Complex reconstruction of the pediatric hand, (2) Birthmarks: Where do we stand?

Zuker RM: American Society of Plastic and Reconstructive Surgeons, Boston, Massachusetts, October 1998. Complex facial nevi: A surgical algorithm.

Zuker RM: Stanford University, Palo Alto, California, October 1998. Facial paralysis: Options for rebuilding the smile.

Zuker RM: International Society for Burn Injuries, Jerusalem, Israel, November 1998. State of the art: Advances in pediatric burn care.

Zuker RM: Elias Sourasky Medical Centre, Tel-Aviv, Israel, November 1998. Options for building a smile in facial paralysis.

Zuker RM: American Society of Reconstructive Microsurgery, Waikoloa, Hawaii, January 1999. Pediatric microsurgery.

Zuker RM: Operation Smile, Journey of Hope, Manila, Philippines, March 1999. Microsurgery in children.

Zuker RM: Visiting Professor, Indiana University Medical Center, Indianapolis, Indiana, May 1999. Pediatric microvascular surgery.

Zuker RM: International Society for Reconstructive Microsurgery, Los Angeles, California, June 1999. (1) Muscle transplantation for the extremities: Where have we come and what is the future?, (2) Functioning muscle transplantation innervated by the masseteric motor nerve in children with Moebius syndrome, (3) Mandibular reconstruction in children.

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

Acute skeletal muscle ischemic pre-conditioning: Mechanism and clinical applications. *Forrest CR*, Pang CY: Medical Research Council of Canada (\$183,000 1995 - 1998).

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).

Radiotherapy-induced craniofacial bone growth retardation: Preliminary studies to investigate the role of radioprotection. *Forrest CR*: American Society of Plastic Reconstructive Surgeons (\$7,500 1999 - 2000).

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).

The efficacy of acute pharmacologic pre-conditioning of cultured human skeletal muscle cells against infarction. *Forrest CR*, Pang CY, Neligan PC: American Society of Plastic Reconstructive Surgeons (\$6,300 1998 - 1999).

The fate of bone allografts in orbital-zygomatic complex defects in the infant rabbit. *Forrest CR*: J.P. Bickell Foundation (\$23,500 1997 - 1998).

HONOURS RECEIVED

Forrest CR: W.K. Lindsay Research Supervisor Award, Division of Plastic Surgery, Department of Surgery, University of Toronto, March 1999.

DIVISION OF UROLOGY

Dr. D.J. Bagli - Assistant Professor
Dr. A.E. Khoury - Associate Professor (*Division Head*)
Dr. G.A. McLorie - Associate Professor
Dr. P.A. Merguerian - Assistant Professor

PUBLICATIONS

Bagli DJ, Agarwal SK, Venkateswaran S, Shuckett B, Khoury AE, Merguerian PA, McLorie GA, Liu K, Niederberger CS: Artificial neural networks in pediatric urology: Prediction of sonographic outcome following pyeloplasty. *Journal of Urology* 1998 September: 160: pp 980-983.

Barrieras D, McLorie GA: The practical value of augmented uroflowmetry in children. *Contemporary Urology* 1999 January: pp 46-49.

Capolicchio G, McLorie GA, Chan A, Farhat W, Chitayat D, Bagli DJ, Merguerian PA, Nielson B, Khoury AE: Presence of bilateral fallopian tubes with measurable mullerian inhibiting substance (MIS) in a true hermaphrodite. *Urology* 1999 May: 53: pp 1033.

DiTizio V, Ferguson GW, Mittelman MW, Khoury AE, Bruce AW, DiCosmo F: A liposomal hydrogel for the prevention of bacterial adhesion to catheters. *Biomaterials* 1998 October: 19: pp 1877-1884.

Homayoon K, Pippi Salle JL, Agarwal SK, Bagli DJ, McLorie GA, Gilday DL, Khoury AE: Relative accuracy of renal scan in estimation of renal function during partial ureteral obstruction. *Canadian Journal of Urology* 1998 October: 5: pp 611-619.

Husmann DA, Vandersteen DR, McLorie GA, Churchill BM: Urinary continence after staged bladder reconstruction for cloacal exstrophy: The effect of coexisting neurological abnormalities on urinary continence. *Journal of Urology* 1999 May: 161: pp 1598-1602.

Iocca AJ, Khoury AE: Acute appendicitis presenting as priapism in an eight year old. *Canadian Journal of Urology* 1998 August: 5: pp 597-598.

Joyner BD, Khoury AE: Supravesical urinary diversion. In: Glenn's Urologic Surgery, Fifth Edition (Graham SD, ed). Lippincott-Raven Publishers, Philadelphia 1998: pp 729-736.

Merguerian PA, Agarwal SK, Greenberg M, Bagli DJ, Khoury AE, McLorie GA: Outcome analysis of rhabdomyosarcoma of the lower urinary tract. *Journal of Urology* 1998 September: 160: pp 1191-1194.

Merguerian PA, Jamal MA, Agarwal SK, McLorie GA, Bagli DJ, Shuckett B, Gilday DL, Khoury AE: The utility of SPECT DMSA renal scanning in the evaluation of children with primary vesicoureteral reflux. *Urology* 1999 May: 53: pp 1024-1028.

Merguerian PA, Pugach JL, Lilge L, Bagli DJ, McLorie GA, Khoury AE: Non-thermal ureteral tissue bonding: Comparison of photochemical collagen crosslinking with thermal laser bonding. *SPIE* 1999 June: 3590: pp 194-203.

Merguerian PA, Pugach JL, Parks J, Sepers M, Lilge L: Photodynamic therapy of the rabbit bowel and bladder with systemic and topical aminolevulinic acid. *SPIE* 1999 June: 3590: pp 156-164.

Merguerian PA, Reddy PP, Barrieras D, Bagli DJ, McLorie GA, Khoury AE: Initial experiences with endoscopic holmium laser in the pediatric population. *SPIE* 1999 June: 3590: pp 176-181.

Navarro O, Conolly B, Taylor G, Bagli DJ: Metanephric adenoma of the kidney: A case report. *Pediatric Radiology* 1999 February: 29: pp 100-103.

Pippi Salle JL, McLorie GA, Bagli DJ, Khoury AE: Modifications of and extended indications for the Pippi Salle procedure. *World Journal of Urology* 1998 September: 16: pp 279-284.

Pugach JL, McLorie GA, Khoury AE: Ureterocystoplasty: Overview and surgical technique. *Dialogues in Pediatric Urology* 1998 August: 21: pp 2.

Reddy PP, Barrieras DJ, McLorie GA, Khoury AE: Combined exstrophy/epispadias repair at birth: The Toronto experience at The Hospital for Sick Children. *Dialogues in Pediatric Urology* 1999 March; 22: pp 5-6.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Bagli DJ: The Spina Bifida and Hydrocephalus Association of Ontario, Toronto, Ontario, August 1998. Recent advances in current therapy for the urological care in spina bifida patients.

Khoury AE: Department of Urology, Boston Children's Hospital, Boston, Massachusetts, June 1999. (1) Surgical options to achieve continence in reconstructed bladders, (2) Results of single stage reconstruction for bladder exstrophy and epispadias, (3) Biomaterial related infections: New insights into catheter related UTI's and their prevention.

Khoury AE: Canadian Urological Association, London, Ontario, June 1999. Chair educational forum IV: Pediatric urology.

Khoury AE: McGill University Health Centre/Montreal Children's Hospital, Montreal, Quebec, February 1999. (1) Reconstructive surgery for the lower urinary tract: Technical considerations, (2) Biomaterial related infection: A common story in dialysis and urinary catheters.

Khoury AE: Dalhousie University, Halifax, Nova Scotia, November 1998. (1) Bladder augmentation: What have we learned so far?, (2) Insights into catheter-related infections, (3) Moderator: Academic sessions.

Khoury AE: Laval University, Quebec City, Quebec, October 1998. (1) What's new in pediatric urology?, (2) Bladder augmentation and reconstruction: Technical pointers and potential complication.

Khoury AE: Surfaces in Biomaterials Foundation, Tucson, Arizona, September 1998. The pathophysiology and management of device related infections.

McLorie GA: Prairie Urological Association, Edmonton, Alberta, February 1999. (1) Cryptorchidism and laparoscopy, (2) Posterior urethral valves: A changing algorithm in initial management.

McLorie GA: Mainz University School of Medicine, Mainz, Germany, February 1999. (1) Meningomyelocele and neurogenic bladder, (2) Posterior urethral valves: Initial treatment and management.

Merguerian PA: European Society for Pediatric Urology, Istanbul, Turkey, April 1999. Moderator: Obstructive uropathy.

Merguerian PA: American Academy of Pediatrics, San Francisco, California, October 1998. Moderator: Abstract presentations: Hypospadias.

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).

Dismembered sutureless uretero-ureterostomy: Comparison of laser welding and fibrin glue repair to sutured anastomoses. *Merguerian PA*: Physicians Services Incorporated Foundation (\$47,500 1998 - 1999).

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 biodegradable polyurethane/tissue hybrid dressings for use in chronic wound, burn and urological applications. *Woodhouse KA*, Merguerian PA: Materials and Manufacturing Ontario (\$120,000 1999 - 2000).

Prostate specific antigen in the diagnosis of dysfunctional voiding in pediatric patients. *Bagli D, Reddy P*: The Hospital for Sick Children Foundation (\$30,000 1998 - 1999).

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

Study the role of RHAMM peptides in two additional wound repair models. *Turley E, Bagli D*: Cangene Corporation (\$262,148 1997 - 1998).

The use of urothelial cell cultures grown on polyurethane scaffolds and the use of acellular bladder matrix for augmentation cystoplasty. *Merguerian PA, Woodhouse K*: Canadian Urological Association (\$30,000 1998 - 1999).

MOUNT SINAI HOSPITAL

Surgeon-in-Chief - Dr. Z. 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 Mount Sinai Hospital is proud to have the newly developed Surgical Skills Centre on the premises. The Surgical Skills Centre, under the direction of Carol Hutchison, has been an enormous success. Funding has come from industry and private donations, as well as peer reviewed grants for research in postgraduate education. Over 100 of our Department of Surgery members have participated in teaching within the Surgical Skills Centre during this past academic year. Evaluations of each session and of the surgical staff teaching are made each session by the residents involved. The initial analysis has shown great enthusiasm for the concept of the Surgical Skills Centre, as well as excellence in teaching by our Department of Surgery staff. Other departments such as Obstetrics and Gynaecology, Otolaryngology and Ophthalmology have embraced this concept and are participating in resident teaching within the Surgical Skills Centre. In addition, postgraduate courses and continuing medical education events have been booked, and interest in the Surgical Skills Centre has increased during the academic year, and is predicted to increase even further during the next academic year. Particular thanks go to Wendy Leadbetter and Sherrie Bilan for their commitment to this enterprise and to their expertise in directing the daily functions. We are indebted to Dr. Arnold Aberman, Dean of the Faculty of Medicine, for arranging interim financing in order to establish the Surgical Skills Centre.

Within the Division of General Surgery, the major programs continue to be inflammatory bowel disease, GI oncology, breast cancer and head and neck surgery. The Division was restructured this year into two teams. One has a focus on colorectal surgery and the other on GI oncology. A surgical oncology fellow is now assigned to the GI oncology team at all times and two colorectal fellows alternate between the Mount Sinai Hospital Division

and a second division encompassing the Toronto General Hospital, St. Michael's Hospital, Women's College Hospital and St. Joseph's Health Centre.

There are several active research programs. Steve Gallinger heads up a collaborative group of clinicians and scientists involved in research in familial gastrointestinal cancer. This group has been successful in securing a number of grants, including a National Cancer Institute of Canada grant, looking at pancreatic cancer, of which Steve Gallinger is the principal investigator. There is continuation of funding from the National Institutes of Health grant for the colon cancer registry looking prospectively at all colorectal cancer cases in Ontario. Robin McLeod continues to head a Canadian colorectal trials group. Both Robin McLeod and Zane Cohen are involved in a multi-disciplinary inflammatory bowel disease genetics program. This work is funded by the Crohn's and Colitis Foundation of Canada. Robin McLeod is also the principal investigator of a grant from the Crohn's and Colitis Foundation of Canada studying patient preferences for maintenance therapy in Crohn's disease. Drs. McLeod and Cohen were awarded another grant from the International Organization of Inflammatory Bowel Disease studying long-term changes in pouch mucosa. Helen MacRae collaborates with the surgical education group and received a grant from the Physicians Services Incorporated Foundation to study surgical skills of family medicine residents.

Carol Swallow continues to head the Surgical Oncology Training Program and, as of July 1, 1999, Zane Cohen was named Chair of the Division of General Surgery in the Department of Surgery at the University of Toronto.

Honours received by the Division include the Northwest Colon and Rectal Surgeons Society Award for the best paper presented at the annual meeting of the American Society of Colon and Rectal Surgeons. This was awarded to Robin McLeod and collaborators for the results of a randomized controlled trial of the management of chronic anal fissure. Other Toronto collaborators included Marcus Burnstein, Claude Burul and Richard Reznick. Carol Swallow was the Society for Surgery of the Alimentary Tract representative to the World Congress of Gastroenterology in Vienna in September 1998. She is also the recipient of a faculty research fellowship from the American College of Surgeons. Current needs within the Division are for a breast/endocrine surgeon and a hepatobiliary surgeon to complement the work of Steve Gallinger and to interact with the

combined Mount Sinai Hospital/Toronto General Hospital Hepatobiliary Program.

The Orthopaedic Division is divided into an orthopaedic oncology service and a reconstructive orthopaedic service. Within oncology, Bob Bell was made a member of the Commission on Cancer of the American College of Surgeons, was the Collins Visiting Professor at the University of Ottawa, and the Musculoskeletal Visiting Professor at the Mayo Clinic. Jay Wunder received a one year grant from the National Cancer Institute of Canada for his project on investigation of the biological importance of molecular alterations in sarcoma. He was also the Southern Illinois University Visiting Professor for orthopaedics.

Within the reconstructive service, Erin Boynton received a prestigious scholarship from the Arthritis Society of Canada to study the role of the macrophase in total joint replacement failure. Allan Gross was the invited plenary lecturer at the 21st World Congress of the International Society of Orthopaedic Surgery and Traumatology in Sydney, Australia. His research funding includes a grant from the Arthritis Society and from the Knee Society of the American Academy of Orthopaedic Surgeons. This past academic year there was the establishment of the Rubinoff/Gross Chair in Orthopaedic Oncology at the Mount Sinai Hospital in recognition of Allan Gross achievements. In addition, there was the establishment of the Bernie Ghert Family Foundation Chair in Reconstructive Orthopaedics to be held initially by Allan Gross. Carol Hutchison is the D.H. Gales Director of the University of Toronto Surgical Skills Centre at the Mount Sinai Hospital and won an Ontario Confederation of University Faculty Association teaching award. Her research grants include support from the Association for Surgical Education to study the role of cognition in a technical skills course designed for junior surgical residents. In addition, she is a collaborator on a Physicians Services Incorporated Foundation grant evaluating the effectiveness of a two year curriculum in a surgical skills centre: The future of surgical training.

The Division of Urology has a significant national and international reputation in the area of male factor infertility. Keith Jarvi was invited as a visiting professor to present at the Mexican Society for Reproduction in Mexico City and at the University of Ottawa. He was invited to present to the National Institutes of Health and participate in the International Prostatitis Collaborative Network in Bethesda, discussing prostatitis and

male infertility. Armand Zini was invited as a visiting professor to present various aspects of male infertility at the 17th Congress of the Venezuela Urology Association in Caracas, as well as the 7th Congress of the Morocco Urology Association. He was also invited to the Canadian Fertility and Andrology Society and the Society for the Study of Male Reproduction in Dallas, Texas to discuss sperm abnormalities. Martin Buckspan was invited as a visiting professor to participate in the University of Ottawa, Division of Urology Resident Research Day.

Manuscripts from the Division have concentrated on clinical and experimental aspects of male infertility. Funding of divisional research activities have been through the National Institutes of Health and the Canadian Cystic Fibrosis Foundation.

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

Bapat B, Madlensky L, Temple L, Hiruki T, Redston M, Baron D, Xia L, Marcus V, Soravia C, Mitri A, Shen W, Gryfe R, Berk T, Chodirker B, Cohen Z, Gallinger S: Family history characteristics, tumor microsatellite instability, and germline MSH2 and MLH1 mutations in hereditary colorectal cancer. *Human Genetics* 1999 May; 104: pp 167-176.

Bapat B, Noorani H, Cohen Z, Berk T, Mitri A, Gallie B, Pritzker K, Gallinger S, Detsky A: Cost comparison of predictive genetic testing versus conventional clinical screening for familial adenomatous polyposis. *Gut* 1999 January; 44: pp 698-703.

Berk T, Cohen Z: The inherited colorectal cancer registry: Families are our patients. *Perspectives in Colon and Rectal Surgery* (Schrock T, ed). Thieme Publications, New York 1999: pp 11.

Berk T, Cohen Z, Bapat B, Gallinger S: Negative gene test results in familial adenomatous polyposis (FAP): Clinical screening implications. *Diseases of the Colon and Rectum* 1999 March; 42(3): pp 307-312.

Cohen Z, McLeod RS: Proctocolectomy with the kock pouch. In: *Operative Strategies in Inflammatory Bowel Disease* (Michelassi F, Milsom JW, eds). Springer-Verlag, New York 1999: pp 215-225.

Dessureault S, Graham F, Gallinger S: Autologous lymphocyte responses to adenovirus-B7-1 transduced human cancer cells. *Cancer Gene Therapy* 1999 May; 6: pp 195-208.

Etchells E, McLeod RS, Geerts W, Barton PB, Detsky A: Economic analysis of low dose heparin versus the low molecular weight heparin, enoxaparm, for the prevention of thromboembolic events. *Archives of Internal Medicine* 1999 January; 159: pp 1221-1228.

Grfye R, Di Nicola N, Gallinger S, Redston M: Somatic instability of the APC I1307K allele in colorectal neoplasia. *Cancer Research* 1998 September; 58: pp 4040-4043.

Gryfe R, Di Nicola N, Lal G, Gallinger S, Redston M: Inherited colorectal polyposis and cancer risk of the APC I1307K polymorphism. *American Journal of Human Genetics* 1999 February; 64: pp 378-384.

Hobbs MR, Pole AR, Pidwirny GN, Rosen IB, Zarbo RJ, Coon H, Heath H, Leppert M, Jackson CE: Hyperparathyroidism-jaw tumor syndrome: The HRPT2 locus is within a 0.7-cM region on chromosome 1q. *American Journal of Human Genetics* 1999 April; 64: pp 518-525.

MacRae HM, McLeod RS: Options for treatment of persistent rectovaginal fistulas. *Seminars in Colon and Rectal Surgery* 1999 March: 10(1): pp 49-55.

MacRae HM, McLeod RS: Treatment of the persistent rectovaginal fistula. In: *Seminars in Colon and Rectal Surgery* (Schoetz DJ Jr., ed). W.B. Saunders Company, Philadelphia 1999: pp 49-55.

McLeod RS: Quality of life following surgery for ulcerative colitis. In: *Problems in General Surgery* (Becker JM, ed). Churchill Livingstone, New York 1999: pp 158-166.

Mehta M, Asch M, Gallinger S: Laparoscopic ultrasound guided percutaneous ethanol ablation of hepatocellular carcinoma. *Journal of Vascular and Interventional Radiology* 1998 August: 9: pp 583-587.

Michelassi F, Takanishi D, McLeod RS, Harms BA, Starling JR, Fonkalsrud EW: Ileal reservoirs. In: *Operative Strategies in Inflammatory Bowel Disease* (Michelassi F, Milsom JW, eds). Springer-Verlag, New York 1999: pp 186-214.

Millar A, Pal T, Madlensky L, Sherman C, Gallinger S, Bapat B, Narod S: Mismatch repair gene defects contribute to the genetic basis of double primary cancers of the colorectum and endometrium. *American Journal of Human Genetics* 1999 May: 8: pp 823-829.

Redston M, Nathanson KC, Yuan ZQ, Neuhausen SL, Satagopan J, Wong N, Yang D, Nafa D, Abrahamson J, Ozelik H, Antin-Ozerkis D, Andrulis I, Daly M, Pinsky L, Schrag D, Gallinger S, Kaback M, King M-C, Woodage T, Brody LC, Godwin A, Warner E, Weber B, Foulkes W, offit K: The APC I1307K polymorphism and breast cancer risk. *Nature Genetics* 1998 September: 20: pp 13-14.

Rioux JD, Daly M, Green T, Stone V, Lander E, Hudson T, Steinhart H, Bull S, Cohen Z, Greenberg G, Griffiths A, McLeod R, Silverberg M, Williams CN, Siminovitch K: Absence of linkage between inflammatory bowel disease and selected loci on chromosomes 3, 7, 12 and 16. *Gastroenterology* 1998 November: 115(5): pp 1062-1065.

Rosen IB, Tepperman IJ: Toronto's society doctors. *Annals of the Royal College of Physicians and Surgeons of Canada* 1999 February: 32: pp 33-35.

Sandborn WJ, McLeod RS, Jewell DP: Medical therapy for induction and maintenance of remission in pouchitis: A systematic review. *Inflammatory Bowel Disease* 1999 February: 5: pp 33-39.

Solomon MJ, McLeod RS: Surgery and the randomized controlled trial: Past, present, future. *Medical Journal of Australia* 1998 December: 169: pp 380-384.

Soravia C, Sugg S, Berk T, Mitri A, Chang H, Gallinger S, Cohen Z, Asa S, Bapat B: Familial adenomatous polyposis (FAP) associated thyroid cancer: A clinical, pathological and molecular genetic study. *American Journal of Pathology* 1999 January: 154(1): pp 127-135.

Steinhart AH, Girgrah N, McLeod RS: Reliability of a Crohn's disease clinical classification scheme based on disease behaviour. *Inflammatory Bowel Diseases* 1998 December: 4: pp 228-234.

Sugg SL, Ezzat S, Rosen IB, Freeman JL, Asa SL: Distinct multiple RET/PTC gene rearrangements in multifocal papillary thyroid neoplasia. *Journal of Clinical Endocrinology and Metabolism* 1999 January: 83: pp 4116-4122.

Sugg SL, Ezzat S, Zheng L, Freeman JL, Rosen IB, Asa SL: Oncogene profile of papillary thyroid carcinoma. *Surgery* 1999 January: 125: pp 46-53.

Sugg SL, Ezzat S, Zheng L, Rosen IB, Freeman JL, Asa SL: Cytoplasmic staining of erbB-2 but not mRNA levels correlates with differentiation in human thyroid neoplasia. *Clinical Endocrinology* 1998 December: 49: pp 629-637.

Temple LKF, Naimark D, McLeod RS: Decision analysis as an aid to determining the management of early low rectal cancer for the individual patient. *Journal of Clinical Oncology* 1999 January: 17(1): pp 312-318.

Tobi M, Kaila V, Hassan N, Gallinger S, Fligel S, Hatfield J, Gessell M, Sakr W, Luk G, Odze R: Monoclonal antibody adnab-9 defines a pre-neoplastic marker in epithelium at risk for adenocarcinoma of the small intestine. *Human Pathology* 1999 April: 30: pp 467-473.

Willsher PC, Sanabria J, Gallinger S, Rossi L, Strasberg S, Litwin DEM: Laparoscopic cholecystectomy for acute cholecystitis: A safe procedure. *Journal of Gastrointestinal Surgery* 1999 January: 3: pp 50-53.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Cohen Z: Symposium on Surveillance Endoscopy, American Gastroenterological Association, Orlando, Florida, May 1999. Pouchoscopy: Implications for surveillance following pouch surgery.

Cohen Z: Sahlgrenska University, Goteborg, Sweden, May 1999. Pouchitis and implications for neoplasia.

Cohen Z: Sicilian Surgical Society, Sicily, Italy, May 1999. Natural history of colorectal cancer.

Cohen Z: International Course in Surgery, Madrid, Spain, May 1999. (1) Update on the genetics of inflammatory bowel disease, (2) Difficult, complex, pelvic pouch, (3) Management of advanced duodenal polyposis and desmoid tumors in familial adenomatous polyposis, (4) Perianal Crohn's disease.

Cohen Z: Inflammatory Bowel Disease Education Day, Sault Ste. Marie, Ontario, April 1999. Update on inflammatory bowel disease surgery.

Cohen Z: University of Catania, Catania, Italy, April 1999. Controversies in laparoscopy for colorectal malignant disease.

Cohen Z: Korean Surgical Society, Seoul, Korea, November 1998. Genetic and surgical decision-making in familial polyposis.

Cohen Z: Crossing Borders in Inflammatory Bowel Disease, Barcelona, Spain, October 1998. Cyclosporine versus surgery in acute ulcerative colitis.

Couture J: United Ostomy Association of Canada, Mississauga, Ontario, August 1998. Nouveaux developpements sur le cancer colorectal.

Gallinger S: Association of Genetic Counsellors of Ontario, Toronto, Ontario, June 1999. Colorectal cancer.

Gallinger S: Advances and Controversies in the Management of Colorectal Cancer, Ottawa, Ontario, October 1998. Genetic factors and predisposition to colorectal cancer.

Gallinger S: King's Health Centre, Toronto, Ontario, September 1998. The problem and the promise: Reducing the risk of colorectal cancer.

MacRae HM: Canadian Association of Surgical Chairs/Canadian Society of University Surgeons, Winnipeg, Manitoba, May 1999. Continuing professional development: An educational perspective.

MacRae HM: European Surgical Institute, Norderstedt, Germany, November 1998. Laparoscopic surgery for Crohn's disease.

MacRae HM: Royal College of Physicians and Surgeons of Canada, Toronto, Ontario, September 1998. (1) Teaching thoracic surgery to undergraduate students, (2) Surgical management: Which operation?

McLeod RS: Falk Symposium, Freiburg, Germany, June 1999. Improving the long-term outcome of surgery: The future.

McLeod RS: University of Calgary, Calgary, Alberta, June 1999. Controversies in pouch surgery.

McLeod RS: University of Chicago, Chicago, Illinois, April 1999. Familial colon cancer.

McLeod RS: Queen's University, Kingston, Ontario, April 1999. (1) Surgery for ulcerative colitis, (2) Assessing outcome in surgery.

McLeod RS: European Cancer Centre, Amsterdam, The Netherlands, February 1999. (1) Biliopancreatic malignancy: From gene to cure, (2) Quality of life and nutritional status, (3) Gastrointestinal hormone profile following pancreaticoduodenectomy.

McLeod RS: Mexican General Surgery Association, Leon, Guanajuato, November 1998. (1) Management of rectovaginal fistula, (2) Colon cancer screening, (3) DVT prophylaxis, (4) What's the best operation for chronic ulcerative colitis, (5) Strictureplasty for Crohn's disease.

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

A cross-sectional evaluation of patients with kock and pelvic pouches to assess the small bowel mucosa of the pouch and determine the risk of mucosal proliferative changes and dysplasia. *McLeod RS*, Cohen Z, Redston M: International Organization for Inflammatory Bowel Disease (\$10,000 1998 - 1999).

A randomized controlled trial comparing the effectiveness of surgery and nitroglycerin in the treatment of anal fissures. *McLeod RS*, Richard C: American Society of Colon and Rectal Surgeons Research Foundation (\$17,000 1996 - 1998).

A study to elicit patient minimal clinically important differences for maintenance therapy for Crohn's disease. *McLeod RS*, Detsky A, Llewellyn-Thomas HA: Crohn's and Colitis Foundation of Canada (\$30,920 1998 - 1999).

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).

Chemo-prevention of metachronous adenomatous colorectal polyps: A randomized placebo-controlled double blind evaluation of ursodeoxycholic acid. *McLeod RS, Larson MV, Reznick R, Burnstein MB, Stern HS, Buie D, Silverman R, Plewes A, Gregoire R, Richard C, Diamond G: Axcan Pharma (\$110,000 1998).*

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

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).*

HONOURS RECEIVED

McLeod RS: Northwest Colorectal Surgical Society Award, American Society of Colon and Rectal Surgeons, May 1999.

Swallow CJ: Society for Surgery of the Alimentary Tract Delegate, World Congress of Gastroenterology, September 1998.

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

Anastakis DJ, Regehr G, Reznick RK, Cusimano M, Murnaghan J, Brown M, Hutchison C: Assessment of technical skills transfer from the bench training model to the human model. *American Journal of Surgery* 1998 September: 177: pp 167-170.

Bell RS: Musculoskeletal images: Malignant transformation in familial osteochondromatosis. *Canadian Journal of Surgery* 1999 February: 42(1): pp 8.

Burrow S, Andrulis IL, Pollak M, Bell RS: Expression of insulin-like growth factor receptor, IGF-1, and IGF-2 in primary metastatic osteosarcoma. *Journal of Surgical Oncology* 1998 September: 69(1): pp 21-27.

Dowdy PA, Griffin AM, White LM, Wunder JS, Bell RS: Bone sarcoma diagnosed at the time of reconstructive hip surgery. *Canadian Journal of Surgery* 1998 August: 41: pp 273-282.

Ferracini R, Masterson EL, Bell RS, Wunder JS: Distal ulnar tumors. *Journal of Hand Surgery* 1998 August: 23B: pp 517-521.

Gibbons CLM, Bell RS, Wunder JS, Griffin AM, O'Sullivan B, Catton CN, Davis AM: Function after subtotal scapulectomy for neoplasm of bone and soft tissue. In: *Physical Therapy in Perspective* (Carole-Lewis PT, ed). Mosby Yearbook, Chicago 1998: pp 313-317.

Gross AE, Ghazavi MT, David A: Long-term results of fresh osteochondral allografts for osteochondral defects of the knee secondary to trauma or osteochondritis dissecans. In: *Advances in Tissue Banking* (Phillips GO, Strong DM, Von Versen R, Nather A, eds). World Scientific Publishing Company Limited, Singapore 1998: pp 241-251.

Gross AE, Hutchison CR: Proximal femoral allografts for reconstruction of bone stock in revision hip surgery. *Orthopaedics* 1998 September: 21(9): pp 999-1001.

Haddad FS, Garbuz DS, Marsi BA, Duncan CP, Hutchison CR, Gross AE: Femoral bone loss in patients managed with revision hip replacement: Results of circumferential allograft replacement. *Journal of Bone and Joint Surgery* 1999 January: 81A(3): pp 420-436.

Hutchison C, Cho B, Wong N, Agnidis Z, Gross A: Proximal valgus tibial osteotomy for osteoarthritis of the knee. In: *Instructional Course Lectures 1999* (American Academy of Orthopaedic Surgeons, ed). American Academy of Orthopaedic Surgeons, Rosemont 1999: pp 27-38.

Hutchison CR, Gross AE: Femoral bone grafting: Structural grafts. In: *Revision Total Hip Arthroplasty* (Steinberg ME, Garino JP, eds). Lippincott-Williams and Wilkins, Philadelphia 1998: pp 263-279.

Hutchison CR, Hamstra S, Leadbetter W: The University of Toronto Surgical Skills Centre opens. *Focus on Surgical Education* 1998 September: 16(1): pp 22-24.

Masterson EL, Ferracini R, Griffin AM, Wunder JS, Bell RS: Capsular replacement with synthetic mesh: Effectiveness in preventing post-operative dislocation after wide resection of proximal femoral tumors and prosthetic reconstruction. *Journal of Arthroplasty* 1998 December: 13(8): pp 860-866.

McGoveran BM, Davis AM, Gross AE, Bell RS: Evaluation of the allograft-prosthesis composite technique for proximal femoral reconstruction after resection of a primary bone tumor. *Canadian Journal of Surgery* 1999 February: 42(1): pp 37-45.

Mehta M, White LM, Knapp T, Kandel RA, Wunder JS, Bell RS: MR imaging of symptomatic osteochondromas with pathological correlation. *Skeletal Radiology* 1998 September: 27: pp 427-433.

Probyn LJ, Wunder JS, Bell RS, Griffin AM, Davis A: A comparison of outcome of osteoarticular allograft reconstruction and shoulder arthrodesis following resection of primary tumors of the proximal humerus. *Sarcoma* 1998 December: 12: pp 163-170.

Sandhu JS, Gorczynski R, Waddell J, Nguyen M, Squires J, Waddell JP, Boynton EL, Hozumi N: Effect of IL-6 secreted by engineered human stromal cells on osteoclasts in human bone. *Bone* 1999 January: 24(3): pp 217-227.

Van Brenk B, Richards MB, Mackay MB, Boynton EL: A biomechanical assessment of ligaments preventing dorsoradial subluxation of the trapeziometacarpal joint. *Journal of Hand Surgery* 1998 September: 23A: pp 607-611.

Voronov I, Santerre JP, Binek A, Callhan JW, Sandhu JS, Boynton EL: Macrophage phagocytosis of polyethylene particulate in vitro. *Journal of Biomaterials Research* 1998 October: pp 40-51.

Wong P, Gross AE: The use of structural allografts for treating periprosthetic fractures about the hip and knee. *Orthopaedic Clinics of North America* 1999 April: 30(2): pp 259-263.

Wunder JS, Paulian G, Huvos AG, Heller G, Meyers PA, Healey JH: The histologic response to chemotherapy as a predictor of the oncologic outcome of operative treatment of Ewing's sarcoma. *Journal of Bone and Joint Surgery* 1998 July; 80A: pp 1020-1033.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Boynton EL: Therapeutic Products Program, Health Canada, Ottawa, Ontario, March 1999. Implantable devices, including calcification and how they function.

Gross AE: Charles H. Herndon International Symposium on Bone Allografts, Washington, D.C., April 1999. (1) Co-Chair, (2) Structural allograft for revision arthroplasty of the hip.

Gross AE: World Congress of the Societe Internationale de Chirurgie Orthopaedique et de Traumatologie, Sydney, Australia, April 1999. (1) Role of transplantation in orthopaedic surgery, (2) Running a bone bank.

Gross AE: International Horoszowski Meeting, Tel-Hashomer, Israel, October 1998. Massive allografts in joint replacement.

Gross AE: International Symposium on Musculoskeletal Trauma, Asian Association for Dynamic Osteosynthesis, Hong Kong, China, September 1998. (1) Principles of surgical treatment for periprosthetic fractures in total hip replacement, (2) Principles of surgical treatment for periprosthetic fractures in total knee replacement, (3) Preventive strategies for periprosthetic fractures.

Hutchison CR: Ontario Institute for Studies in Education, Toronto, Ontario, June 1999. The history of and development of the Surgical Skills Centre.

Hutchison CR: AO/ASIF Orthopaedic Trauma, Toronto, Ontario, May 1999. (1) When is IM tibial nailing indicated?, (2) Practical session: Tibial intramedullary nailing.

Hutchison CR: Association for Surgical Education, Boston, Massachusetts, April 1999. (1) Developing educational research, (2) A successful surgical skills program: Let's get started!.

Hutchison CR: Royal College of Physicians and Surgeons of Canada, Toronto, Ontario, September 1998. Teaching technical skills: What's new in the 90's.

Wunder JS: International Advanced Meeting on the Howmedica Modular Resection System, Luxemburg, September 1998. (1) Functional outcomes comparing the cemented rotating-hinge MRS versus the uncemented fixed-hinge Kotz, (2) Measurement of periprosthetic bone remodelling around distal femoral tumor prostheses with Dual Energy X-ray Absortometry (DEXA) scans.

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

A non-SCID mouse model to study one cell function: Use of the model to investigate human bone cell response to alendronate. *Boynton EL*, Sandhu J, Aubin JE: Zimmer Canada (\$60,000 1997 - 1998).

Allografts, grafton and human marrow in SCID mice. *Boynton EL*, Aubin J, Sandhu J: Osteotech Incorporated (\$33,600 1997 - 1998).

Does pre-operative irradiation combined with surgery increase the incidence of wound complications (as compared to post-operative irradiation) in extremity soft tissue sarcoma? *Bell RS, O'Sullivan B, Davis A, Beznak A*: National Cancer Institute of Canada (\$299,000 1994 - 1998).

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).

Evaluation of orthopaedic surgical skills. *Hutchison CR*, McCulloch W: Canadian Orthopaedic Foundation/Hip Hip Hooray (\$3,000 1998 - 1999).

Fluoride and bone quality. *Limeback H, Grynypas M, Hutchison CR, Pritzker K, Zukor D*: Medical Research Council of Canada/Association of Canadian Medical Colleges (\$140,580 1995 - 1998).

IGF in osteosarcoma. *Bell RS, Pollak MN*: National Cancer Institute of Canada (\$73,000 1997 - 2000).

Insulin like growth factor in sarcoma. *Bell RS, Pollak M*: National Cancer Institute of Canada (\$78,000 1997 - 2000).

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

MDR-1 expression and p53 mutation in osteosarcoma. *Bell RS, Andrulis I*: National Cancer Institute of Canada (\$275,000 1996 - 1999).

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).

Severity index for failed total knee arthroplasty. *Windsor RE, Saleh KJ, Engh GA, Gross AE, Haas SB, Laskin RS, Sculco TP, Scuderi GR*: Knee Society/American Academy of Orthopaedic Surgeons (\$30,000 1998 - 1999).

The effectiveness of skills courses at the orthopaedic learning center on the performance of orthopaedic residents. *Hutchison CR, Kasser J, Sherr J, McCulloch W*: American Academy of Orthopaedic Surgeons (\$70,000 1997 - 1999).

Tissue response to polyethylene wear debris. *Boynton EL, Smith D*: Trillium Award (\$20,000 1993 - 1998).

HONOURS RECEIVED

Hutchison CR: Teaching Award, Ontario Confederation of University Faculty Associations, May 1999.

DIVISION OF PLASTIC SURGERY

Dr. N.H. McKee — Professor

PUBLICATIONS

Chen AY, McKee N: Methods for creating and animating a computer model depicting the structure and function of the sarcoplasm reticulum calcium ATPase enzyme. *Journal of Biocommunication* 1999 June: 26: pp 16-22.

Leekam RN, Agur AM, McKee NH: Using sonography to diagnose injury of plantaris muscle and tendons. *American Journal of Roentgenology* 1999 January: 172: pp 185-189.

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

Efficacy of telehealth for teaching specialized clinical rehabilitation techniques. *Barden W, Clarke HM, Young N, McKee NH:* The Hospital for Sick Children Foundation (\$13,227 1998 - 1999).

Human gastrocnemius and soleus muscles: Creation and validation of 3D computer model predicting functional capabilities. *Agur A, McKee NH, Ball K, Salonen D, Leekam R:* AO-Stiftung/ASIF Foundation (\$61,044 1996 - 1998).

Skeletal muscle ischemia-reperfusion injury: Studies of SR Ca(2+) handling. *McKee NH, Green HJ:* Medical Research Council of Canada (\$147,245 1997 - 1999).

DIVISION OF UROLOGY

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

PUBLICATIONS

Garrels KL, Zini AS, Casper RF, Meriano JS, Jarvi KA: Fresh and frozen epididymal sperm yield comparable pregnancy rates for intracytoplasmic sperm injection. *Archives of Andrology* 1998 November: 41: pp 159-165.

Jarvi K, Zini A, Buckspan MB, Ginsberg B, Asch M, Margolis M: Adverse effects on vasoepididymostomy outcomes for men with concomitant abnormalities in prostate and seminal vesicle. *Journal of Urology* 1998 October: 160: pp 1410-1412.

Karakiewicz PI, Zini A, Meshref AW, Bazinet M, Aprikian AG, Elhilali MM: Population-based patterns of radical retropubic prostatectomy use. *Urology* 1998 August: 52: pp 219-223.

O'Bryan MK, Zini A, Cheng CY, Schlegel PN: Human sperm endothelial nitric oxide synthase expression: Correlation with sperm motility. *Fertility and Sterility* 1998 December: 70: pp 143-147.

Zini A, Abitbol J, Girardi SK, Schulsinger D, Goldstein M, Schlegel PN: Germ cell apoptosis and endothelial nitric oxide synthase (eNOS) expression following ischemia-reperfusion injury to the testis. *Archives of Andrology* 1998 September: 41: pp 63-71.

Zini A, Buckspan M, Berardinucci D, Jarvi K: Loss of left testicular volume in men with left varicocele: Correlation with grade of varicocele. *Archives of Andrology* 1998 September: 41: pp 43-47.

Zini A, O'Bryan MK, Israel L, Schlegel PN: Human sperm NADH and NADPH diaphorase cytochemistry: Correlation with sperm motility. *Urology* 1998 August: 51: pp 465-468.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Jarvi K: International Prostatitis Collaborative Network, National Institutes of Health, Bethesda, Maryland, November 1998. Prostatitis and male infertility.

Jarvi K: Canadian Fertility and Andrology Society, Mont Tremblant, Quebec, September 1998. Testicular tissue transplantation.

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).

Alterations in sperm characteristics for men who are heterozygous for CFTR gene mutations. *Jarvi K*, Tsui L-C: Canadian Cystic Fibrosis Foundation (\$50,750 1997 - 1999).

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
Dr. M. Kliman - Orthopaedic Surgery
Dr. R.H. Levine - Plastic Surgery
Dr. A. Marcuzzi — Urology

In recognition of his teaching abilities, the surgical residents at St. Joseph's Health Centre presented Dr. D. Wooster with the Best Teacher Award for 1998-99.

In September 1998, Dr. D. Wooster and Dr. D. Szalay received the J.L. Provan Education Award from the Canadian Society of Vascular Surgeons. The award will be used to develop an interactive e-mail needs assessment model.

Dr. D. Szalay joined the general surgery staff on January 1, 1999 at the rank of Lecturer. He has special training in vascular surgery and is working closely with Dr. D. Wooster.

Dr. L. Smith continues as Director of Medical Education at St. Joseph's Health Centre.

Dr. C. Burul served as organizer for the University Colorectal Journal Club during 1998-99.

As co-chair of the Organizing Committee, Dr. D. Wooster helped to plan the Carotid Duplex Symposium held by the Canadian Association of Radiologists in Quebec City in June 1999. He is Co-ordinator, Postgraduate Course 2001, for the Program Committee of the American College of Surgeons. He has been on the Editorial Board for the Annals of Vascular Surgery since 1997, and a member of the Vascular Subcommittee of the American College of Surgeons since October 1998.

As a member of the Standards Subcommittee, Dr. D. Wooster worked to develop standards for Continuing Professional Development (CPD) for the Royal College of Physicians and Surgeons of Canada. These standards will replace MOCOMP in January 2000.

During the past year, Dr. M. Yaman has visited the United Arab Emirates on two occasions. He was asked to set up a thoracic surgery unit at the Twam Hospital, Al-Aim University and currently he is purchasing equipment on their behalf.

The Thoracic Unit continues to perform lung volume reduction surgery with very good results.

In June 1999, Dr. A. Marcuzzi completed a two year term as President of the Medical Staff Association at St. Joseph s Health Centre. At the June 14, 1999 meeting of the Medical Staff Association, Dr. D. Wooster was elected secretary and Dr. C. Compeau was elected treasurer.

Dr. R. 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)
Dr. C. Compeau - Lecturer
Dr. A. Harmantas - Assistant Professor
Dr. D.P. Jones - Associate Professor
Dr. R. Louch - Lecturer
Dr. L.C. Smith — Assistant Professor
Dr. E.H. Spratt - Associate Professor
Dr. D. Szalay - Lecturer
Dr. D. Wooster - Associate Professor
Dr. M. Yaman — Assistant Professor

PUBLICATIONS

Levesque MA, D'Costa M, Spratt EH, Yaman M, Diamandis EP: Quantitative analysis of p53 protein in non-small cell lung cancer and its prognostic value. *International Journal of Cancer* 1998 September; 79: pp 494-501.

Regehr G, MacRae H, Reznick R, Szalay D: Comparing the psychometric properties of checklists and global rating scales for assessing performance on an OSCE-format examination. *Academic Medicine* 1998 September; 73: pp 993-999.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Smith L: Sudbury General Hospital, Sudbury, Ontario, February 1999. Pre-peritoneal hernia repair.

Wooster DL: Canadian Association of Radiologists, Quebec City, Quebec, June 1999. Moderator workshop: Carotid doppler: Diagnosis II.

Wooster DL: Sanofi Pharmaceuticals, Gravenhurst, Ontario, May 1999. Expert panel on clopidogrel.

Wooster DL: Symposium on Peripheral Arterial Disease, Sudbury, Ontario, April 1999. (1) Workshop director, (2) Diagnosis and management of peripheral arterial disease.

Wooster DL: Symposium on Atherosclerotic Risk Factor Management, Whistler, British Columbia, December 1998. Surgical perspective on risk factor management.

Wooster DL: Vascular Technology Course, Michener Institute, Toronto, Ontario, December 1998. Arterial duplex studies.

Wooster DL: New England Society for Vascular Surgery, Toronto, Ontario, September 1998. Panel: Management of aortic disease.

Yaman M: Twam Hospital/Al-Aim University, United Arab Emirates, December 1998. (1) Lung volume reduction surgery: A new hope for emphysema patients, (2) Secondary metastectomy of the lung, (3) Care of the thoracic patient, (4) Management of chest tubes.

Yaman M: Toronto West Gut Club, Toronto, Ontario, October 1998. Case presentation.

Yaman M: Today's Focus, Tomorrow's Reality, RPN and OR Nurses Association of Ontario, Mississauga, Ontario, October 1998. Video-assisted thoracic surgery update.

HONOURS RECEIVED

Wooster DL: Best Teacher Award, St. Joseph's Health Centre, June 1999.

Wooster DL: J.L. Provan Education Award, Canadian Society of Vascular Surgeons, September 1998.

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.J. Knowlton - Lecturer

Dr. R. Levine - Associate Professor (*Division Head*)

PUBLICATIONS

Brown MH, Weinberg M, Chong N, Levine RH, Holowaty E: Study of breast cancer risk in breast reduction patients. *Plastic and Reconstructive Surgery* 1999 May; 103(6): pp 1674-1681.

Haywood C, Hall JA, Baxter N, Brown MH, Levine RH: Body image and breast reduction: A prospective outcome study of 75 women. *Canadian Journal of Plastic Surgery* 1999 May; 7(3): pp 16-21.

Lipa JE, Neligan PC, Perreault TM, Baribeau J, Levine RH, Knowlton RJ, Pang CY: Vasoconstrictor effect of endothelin-1 (ET-1) in human skin: Role of ETA and ETB receptors. *American Journal of Physiology* 1999 February; 276: pp H359-H367.

Tang C, Brown M, Levine RH, Sloan M, Chong N, Holowaty E: Breast cancer found at the time of breast reduction. *Plastic and Reconstructive Surgery* 1999 May; 103(6): pp 1682-1686.

Tang C, Brown M, Levine RH, Sloan M, Chong N, Holowaty E: Follow-up study of 105 women with breast cancer following reduction mammoplasty. *Plastic and Reconstructive Surgery* 1999 May: 103(6): pp 1687-1690.

Tang C, Levine R, Shankar L: The mysterious case of persistent malocclusion. *Annals of Plastic Surgery* 1998 October: 41(10): pp 420-421.

DIVISION OF UROLOGY

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

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Wait JH: Interstitial Cystitis Society of Ontario, Brantford, Ontario, May 1999. Moderator: Roundtable discussion on interstitial cystitis.

Wait JH: Ontario Medical Association, Hamilton, Ontario, September 1998. Recent advances in the management of interstitial cystitis.

ST. MICHAEL'S HOSPITAL

Surgeon-in-Chief - Dr. E. Poulin

HEADS OF DIVISIONS

Dr. L. 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 amalgamation of the Hospital's two sites continued with the ongoing incorporation of the programs at The Wellesley Central Hospital into those at the Bond Street site. Vascular and neurosurgery were the first divisions to move, with the others to follow over the next twenty-four months. Over twenty building and renovation projects are currently underway at the Bond Site of St. Michael's Hospital and these need to be completed before the transfer of the remaining Wellesley programs can be finalized.

With the preparations for a completely unified department and hospital well underway, the streamlining of various management positions became paramount. Dr. Eric Poulin was appointed as Surgeon-in-Chief of the united Department; Dr. Bill Tucker assumed the leadership of the combined Divisions of Neurosurgery; Dr. Robert Mustard was named Director of Undergraduate Surgical Education for the Academy, and the rest remained unchanged. As with the restructuring of an institution, the unique resultant atmosphere fosters the creation of new programs and ideas. This was the case with the Minimally Invasive Surgery Unit and the Division of Gastroenterology, which combined forces to form the Minimal Access Therapeutics and Diseases of the Digestive System Program, under the medical directorship of Dr. Joseph Mamazza.

The membership also amassed a number of personal appointments outside of the hospital setting. Dr. Earl Bogoch was named to the Editorial Board of the *Journal of Rheumatology*; Dr. John Bohnen was named the new

Director of Postgraduate Surgical Education for the Department of Surgery, University of Toronto; Dr. Tim Daniels was appointed as Canada's representative for the International Committee of the American Orthopaedic Foot and Ankle Society; and Dr. Richard Moulton assumed the Chair of the Trauma Committee.

Our members also received their fair share of honours and awards this year. Dr. Jameel Ali picked up a total of three, including the Society of Surgeons Trauma Recognition Award, a Trauma Leadership Award from the National Association of Emergency Medical Technicians for research and teaching in pre-hospital trauma care, and the Bruce Tovee Award for Postgraduate Teaching, Department of Surgery, University of Toronto. Dr. Michael Cusimano also received a Bruce Tovee Award for Undergraduate Teaching from the Department of Surgery, University of Toronto. The Faculty of Medicine also recognized Dr. Cusimano's academic achievements by honouring him with a W.T. Aikins Award. Dr. Bill Tucker was presented with an Award of Merit from the Kidney Transplant Program, and Dr. Wally Peters received an award for advanced education in cosmetic surgery from the American Society for Aesthetic Plastic Surgery.

The Department was involved in over 100 invited visits, published more than 50 journal articles and attracted some \$44,899,622 worth of financial support for new and ongoing research endeavours. The members also conducted a number of outstanding educational programs. These included the Day in Vascular Surgery, organized by Dr. Michael Ameli and the Terrence Donnelly Cardiac Residents Research Day arranged by Dr. Lee Errett.

Some inroads were also made towards the future planning and advancement of the Department's divisions and programs. Dr. Robin Richards successfully completed two consecutive five-year terms as Head of the Division of Orthopaedic Surgery, and an external review was held to assess the Division's status and future direction.

DIVISION OF CARDIAC SURGERY

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

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Errett LE: Cardiac Surgeons Club of Canada, Turnberry Isle, Florida, April 1999. St. Jude regent valve.

Errett LE: Nurse Practitioners: Navigating the Health Care Frontier, Ontario Hospital Association, Toronto, Ontario, February 1999. Cardiac care: The urban setting.

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

An observational, prospective evaluation of the St. Jude Medical regent heart valve. *Errett L*, Bonneau D, Latter D: St. Jude Medical Incorporated (\$50,000 1998 - 1999).

Evaluation of the OCTOPUS tissue stabilizer during coronary artery revascularization. *Errett LE*, Bonneau D, Latter D, Yao JK: Medtronic of Canada (\$75,000 1997 - 1998).

Multicentre insulin cardioplegia study: A study of insulin cardioplegia for urgent coronary bypass. *Christakis G*, Weisel R, Naylor CD, Bonneau D, Errett L, Latter D, Yao JK: Medical Research Council of Canada (\$168,000 1997 - 1998).

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 D, Adelman A: Medical Research Council of Canada (\$192,380 1998 - 1999).

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).

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

PUBLICATIONS

Ali J, Adam RU, Gana TJ, George B, Taylor A, Patino T, West U, Ali E, Bedaysie H: Impact of the pre-hospital trauma life support (PHTLS) program as assessed by medical and paramedical personnel in Trinidad and Tobago. *West Indies Medical Journal* 1998 September: 47(3): pp 102-104.

Ali J, Adam R, West U, Winn J, Ali E, Bedaysie H, Pierre I: Effect of the basic pre-hospital trauma life support (PHTLS) program on cognitive and trauma management skills. *World Journal of Surgery* 1998 December: 22(12): pp 1192-1196.

Bohnen J, Marshall J, Fry D, Johnson S, Solomkin J: Clinical and scientific importance of source control in abdominal infections: Summary of a symposium. *Canadian Journal of Surgery* 1999 April: 42(2): pp 122-126.

Doyle GJ, Pugash RA, Clark JA, Mustard RA: Jejunal perforation mimicking acute pancreatitis in a patient with systemic lupus erythematosus: Case report. *Canadian Association of Radiology Journal* 1999 June: 50(3): pp 159-160.

Dvali L, Quan C, Pugash R, Poulin E, Peters W: Empyema necessitans presenting as a gas-forming cellulitis in an HIV+ man: Case report. *Canadian Journal of Plastic Surgery* 1999 April: 7(2): pp 53-56.

Elmarajhy AW, Schemitsch EH, Burnstein MJ, Waddell JP: Ogilvie's syndrome after lower extremity arthroplasty. *Canadian Journal of Surgery* 1999 April: 42: pp 133-137.

Ferguson ND, Poulin EC, Fornasier VL, Smyth HS, Ezzat S: A minimally invasive approach to the management of bronchial carcinoid tumors associated with ectopic Cushing's Syndrome. *Endocrine Pathology* 1998 November: 9: pp 249-253.

Goodwin PJ, Ennis M, Pritchard KI, McCreedy D, Koo J, Sidlofsky S, Trudeau M, Hood N, Redwood S: Adjuvant treatment and onset of menopause predict weight gain after breast cancer diagnosis. *Journal of Clinical Oncology* 1999 January: 17: pp 120-129.

Mahoney L, Ali J, Burul C, Lickley L, Sidlofsky S, Taylor G, Ambus U, Koo J, McRitchie D, McCreedy D, Stoik G, Weizel H: Guidelines for the management of breast lumps. *Canadian Journal of Surgery* 1998 December: 41(6): pp 476-477.

Michaels E, Wedge JH, Poulin EC: Preparing yourself for same-day surgery. *Health News* 1998 November: 16(4): pp 211-217.

Poulin EC: Laparoscopic splenectomy. In: *Mastery of Endoscopic and Laparoscopic Surgery* (Ewbanks E, Soper N, Swanstrom L, eds). Little, Brown and Company, Chicago 1999: pp 1110-1121.

Poulin EC, Mamazza J, Schlachta CM, Gregoire R, Roy N: Laparoscopic colon resection does not adversely affect early survival curves in patients operated on for colorectal adenocarcinoma. *Annals of Surgery* 1999 April: 229: pp 487-492.

Poulin EC, Schlachta CM, Mamazza J: Correcting reflux laparoscopically. Canadian Journal of Gastroenterology 1998 September: 12(5): pp 327-332.

Wong JK, Mustard R, Gray RR, Sadler DJ, Sanabria J, Bohnen JMA, Schouten BD, Doyle G, Pugash RA: Predicting infection in localized intra-abdominal fluid collections: Value of pH and pO₂ measurements. Journal of Vascular Interventional Radiology 1999 May: 10(4): pp 421-427.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Ali J: New Halifax Infirmery Site/QUII Health Sciences/American College of Surgeons, Halifax, Nova Scotia, May 1999. Advanced trauma life support (ATLS) instructor course.

Ali J: XIX Congresso Nacional, Lisbon, Portugal, March 1999. The role of thoracotomy in the trauma resuscitation.

Ali J: Instituto Nacional de Emergencia Medica, Lisbon, Portugal, March 1999. Advanced trauma life support provider course.

Ali J: Queen Elizabeth Hospital, Barbados, West Indies, December 1998. Pre-hospital trauma life support (PHTLS) instructor course.

Ali J: Mount Hope Medical Centre, Trinidad and Tobago, West Indies, December 1998. Pre-hospital trauma life support (PHTLS) instructor update.

Ali J: University of Hong Kong, Hong Kong, China, December 1998. (1) Advanced trauma life support provider course, (2) Advanced trauma life support instructor course.

Ali J: University of Hong Kong, Hong Kong, China, November 1998. (1) Advanced trauma life support (ATLS) instructor course, (2) Advanced trauma life support (ATLS) provider course.

Ali J: American Association for the Surgery of Trauma, Baltimore, Maryland, September 1998. Comparison of performance of interns after completing the old (1993) and new interactive (1997) ATLS course.

Ali J: University of Hong Kong, Hong Kong, China, July 1998. (1) Advanced trauma life support instructor course, (2) Advanced trauma life support provider course.

Bohnen JMA: Trillium Health Centre, Mississauga, Ontario, June 1999. Management of abdominal infection.

Bohnen JMA: Critical Care Day, McMaster University, Hamilton, Ontario, May 1999. Management of abdominal infection.

Bohnen JMA: American College of Surgeons, Orlando, Florida, October 1998. Prophylactic antibiotics in clean operations.

Bohnen JMA: Canadian Association of General Surgeons, Toronto, Ontario, September 1998. The third revolution: Accountability in the 90's.

Bohnen JMA: Royal College of Physicians and Surgeons of Canada/College of Family Physicians, Toronto, Ontario, September 1998. (1) Chair: Quality improvement, (2) Basics of quality improvement.

Burnstein MJ: Humber River Regional Hospital, Toronto, Ontario, December 1998. Role of the surgeon in constipation and fecal incontinence.

Burnstein MJ: Scarborough Gut Club, Toronto, Ontario, October 1998. Constipation and fecal incontinence.

Burnstein MJ: Postgraduate Course in Colon and Rectal Surgery, American College of Surgeons, Orlando, Florida, October 1998. Ileoanal pouch dysfunction.

Burnstein MJ: Postgraduate Course in Surgery in the Elderly, Canadian Association of General Surgeons, Toronto, Ontario, September 1998. (1) Laparoscopic surgery: Early feeding and mobilization, (2) Epidural analgesia: Does it work?

Mamazza J: Canadian Association of General Surgeons, Toronto, Ontario, September 1998. (1) Is laparoscopic total abdominal colectomy and total proctocolectomy for ulcerative colitis safe and effective?, (2) Is laparoscopic resection for Crohn's disease safe and comparable to laparoscopic resection for other diagnoses?, (3) Determinants of operative outcomes in laparoscopic colorectal surgery: A multiple regression analysis of 398 procedures, (4) Should enteric fistulae from Crohn's disease or diverticulitis be treated laparoscopically or by open surgery?: A matched group comparison, (5) Laparoscopic colon resection does not adversely affect early survival curves in patients operated on for colon and rectal adenocarcinoma.

Poulin EC: Southern Ontario Surgical Society, Runaway Bay, Jamaica, November 1998. (1) Avoiding laparoscopic injury, (2) Laparoscopic surgery for colorectal cancers, (3) Videos and case presentations.

Poulin EC: Canadian Association of General Surgeons, Toronto, Ontario, September 1998. (1) Laparoscopic resection does not adversely affect early survival curves in patients operated on for colon and rectal adenocarcinoma, (2) Advanced laparoscopic surgery, (3) The training and credentialling for new procedures in general surgery: The credentialling of new skills, (4) Is laparoscopic total abdominal colectomy and total proctocolectomy for ulcerative colitis safe and effective?: A preliminary report, (5) Is laparoscopic resection for Crohn's disease safe and comparable to laparoscopic resection for other diagnoses?, (6) Determinants of operative outcome in laparoscopic colorectal surgery: A multiple regression analysis of 398 procedures, (7) Should enteric fistulae from Crohn's disease or diverticulitis be treated laparoscopically or by open surgery?: A matched group comparison.

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

A randomized controlled trial investigating the effect of teaching medical and allied health professionals methods and tools for improving clinical practice. *Irvine D, Baker R, Bohnen J, Zahn C, Trimnell J, Sidani S:* National Health Research and Development Program (\$73,610 1996 - 1998).

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 centre: The future of surgical training? *Reznick R, Anastakis DJ, Brown M, Ali J, Hamstra S, Hutchison C, Murnaghan J, Regehr G*: Physicians Services Incorporated Foundation (\$82,555 1998 - 2000).

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

MK-0826 versus piperacillin/tazobactam in the treatment of serious, complicated intra-abdominal infections. *Bohnen JMA*: Merck Frosst Incorporated (\$16,000 1999).

Obesity and related factors in breast cancer: A prospective cohort study. *Pamela G, Ennis M, Pritchard K, McCready D, Koo J, Sidlofsky S, Trudeau M*: Canadian Breast Cancer Research Initiative (\$74,170 1997 - 1998).

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

Ali J: E.B. Tovee Postgraduate Teaching Award, Department of Surgery, University of Toronto, May 1999.

Ali J: Trauma Recognition Award, Society of Surgeons, December 1998.

Ali J: Trauma Leadership Award, National Association of Emergency Medical Technicians, October 1998.

Ali J: Pre-hospital Trauma Life Support Leadership Award, National Association of Emergency Medical Technicians, October 1998.

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

Alkhani AM, Cusimano M, Kovacs K, Bilbao JM, Horvath E, Singer W: Cytology of pituitary thyrotroph hyperplasia in protracted primary hypothyroidism. *Pituitary Pathology* 1999 January: 1: pp 291-295.

Anastakis D, Regehr G, Reznick RK, Cusimano MD, Murnaghan J, Brown M, Hutchison CR: Assessment of technical skills transfer from the bench training model to the human model. *American Journal of Surgery* 1999 February: 177(2): pp 167-170.

Cusimano MD, David MA: A compendium of higher education opportunities in health professions education. *Academic Medicine* 1998 December: 73: pp 1255-1259.

Cusimano MD, Rothman A, Keystone J: Defining standards of competent performance on an OSCE. *Academic Medicine* 1998 October: 73(10): pp S112-S113.

Haight JS, Moulton RJ, Fong I, Hoffstein V, Werger J, Fenton RS: Cervicovertebral osteitis: A complication of uvulopalatopharyngoplasty with tonsillectomy. *Journal of Otolaryngology* 1999 February: 28(1): pp 49-50.

Hamstra S, Cusimano M, Anastakis D, Reznick R: What you can't see can't help you: Visual perceptual factors influencing the acquisition of surgical skills. *Focus on Surgical Education* 1998 December: 16: pp 36-37.

Stuss DT, Binns MA, Carruth FG, Levine B, Brandys CE, Moulton RJ, Snow WG, Schwartz ML: The acute period of recovery from traumatic brain injury: Post-traumatic amnesia or post-traumatic confusional state? *Journal of Neurosurgery* 1999 April: 90(4): pp 635-643.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Cusimano MD: Society of Neurological Surgeons, Colorado Springs, Colorado, May 1999. An introduction to outcome studies of residency training: How should the Society of Neurological Surgeons proceed with the evaluation of residency training?

Cusimano MD: Pituitary Tumor Support Group, Toronto, Ontario, May 1999. (1) Organizer, (2) Craniopharyngioma and non-functional pituitary tumors.

Moulton RJ: Canadian Association of Clinical Neurophysiology, Edmonton, Alberta, June 1999. Brachial plexus surgery.

Moulton RJ: University of Saskatchewan, Saskatoon, Saskatchewan, April 1999. (1) Cerebral monitoring in severe closed head injury, (2) Head injury: Mass lesions, triage and treatment delays.

Moulton RJ: Trauma Association of Canada/American Association for the Surgery of Trauma, Baltimore, Maryland, September 1998. Severe traumatic brain injury at the millennium.

Muller PJ: Barrow Neurological Institute, Phoenix, Arizona, May 1999. Photodynamic therapy of brain tumors: Principles, practice and phase 2 results.

Muller PJ: Pituitary Tumor Support Network of Canada International Conference, Toronto, Ontario, May 1999. Pituitary surgery.

Muller PJ: American Association for Laser Medicine and Surgery, Orlando, Florida, April 1999. Photodynamic therapy of brain tumors: Results of phase 2 studies and demographics from phase 3 studies.

Muller PJ: Korean Neurosurgical Society, Seoul, Korea, October 1998. Photodynamic therapy of cerebral gliomas.

Muller PJ: Korean National Hospital/National University, Seoul, Korea, October 1998. (1) Clinical presentation and complications of surgical treatment, (2) Aberrant paracrine and autocrine regulatory circuits in growth hormone producing pituitary adenomas.

Muller PJ: Khadiwala Memorial Lecture, Colorado Neurological Institute, Denver, Colorado, September 1998. Photodynamic therapy of malignant brain tumors.

Muller PJ: International Photodynamic Therapy Association, Nantes, France, July 1998. (1) Photodynamic therapy of brain tumors: A review, (2) Photodynamic therapy of supratentorial gliomas.

Perrin RG: Neurosurgery '99: Zimbabwe Course, Harare, Zimbabwe, May 1999. Neurosurgical aspects of AIDS.

Perrin RG: Centre Hospitalier Universitaire de Rabat, Rabat, Morocco, May 1999. (1) Neurosurgical aspects of AIDS, (2) Spinal metastases.

Tucker WS: Canadian Congress of Neurological Sciences, Edmonton, Alberta, June 1999. Medicolegal issues in neurology and neurosurgery.

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).

Assessment of technical skills transfer from the bench training model to the human model. *Anastakis D*, Brown M, Cusimano M, Hutchison C, MacRae H, Murnaghan J, Tucker W, Reznick R: Physicians Services Incorporated Foundation (\$37,900 1996 - 1998).

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

Do infectious agents play a casual role in carotid atherosclerosis? *Jahromi B*, Tucker WS, Hutchison S, Chiu B: Physicians Services Incorporated Foundation (\$14,000 1998 - 1999).

Evaluation of a comprehensive neurotrauma prevention program for children in Ontario. *Cusimano MD, Tator C, Sam E*: Rick Hansen Neurotrauma Initiative/Ontario Neurotrauma Foundation (\$60,000 1998 - 1999).

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).

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).

The effectiveness of trauma mannikin computer simulation in undergraduate education. *Gilbart M, Hutchison CR, Cusimano MD, Regehr G, Waddell J*: Zimmer Canada (\$4,000 1998).

HONOURS RECEIVED

Cusimano MD: E.B. Tovee Undergraduate Teaching Award, Department of Surgery, University of Toronto, May 1999.

Cusimano MD: W.T. Aikins Award for Individual Teaching Performance, Faculty of Medicine, University of Toronto, May 1999.

Tucker WS: Award of Merit, Kidney Transplant Program 1969-1999, April 1999.

DIVISION OF ORTHOPAEDIC SURGERY

Dr. E.R. Bogoch - Associate Professor

Dr. T.R. Daniels - Assistant Professor

Dr. D.E. Hastings - Professor

Dr. R. 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

Beauchamp M, Beaton DE, Barnhill TA, Mackay M, Richards RR: Functional outcome following the L'Episcopo procedure. *Journal of Shoulder and Elbow Surgery* 1998 July: 7: pp 90-96.

Bogoch ER, Moran EL: Abnormal bone remodelling in inflammatory arthritis: Surgical biology for the clinician. *Canadian Journal of Surgery* 1998 August: 41(4): pp 264-271.

Daniels TR: Diabetic foot ulcerations: An overview. In: *Ostomy/Wound Management* (Sibbald RG, Kononenko C, eds). Health Management Publications, Wayne 1998: pp 76-84.

Dubois RW, Lim D, Hebert P, Sherwood M, Gershon H, Grove G, Hardy JF, Park RE, Waddell JP: The development of indications for the pre-operative use of recombinant erythropoietin. *Canadian Journal of Surgery* 1998 October: 41(5): pp 351-365.

El Maraghy AW, Humeniuk B, Anderson GI, Schemitsch EH, Richards RR: Femoral bone blood flow after reaming and intramedullary canal preparation: A canine study using laser Doppler flowmetry. *Journal of Arthroplasty* 1999 February: 14(2): pp 220-226.

El Maraghy AW, Schemitsch EH, Burnstein MJ, Waddell JP: Ogilvie's syndrome after lower extremity arthroplasty. *Canadian Journal of Surgery* 1999 April: 42(2): pp 133-137.

Farragos A, Schemitsch EH, McKee MD: Complications of intramedullary nailing for fractures of the humeral shaft: A review. *Journal of Orthopaedic Trauma* 1999 May: 13(1): pp 259-267.

Hupel TM, McKee MD, Waddell JP, Schemitsch EH: Primary external fixation of rotationally unstable pelvic fractures in obese patients. *Journal of Trauma: Injury, Infection, Critical Care* 1998 July: 45(1): pp 111-115.

Jain R, Podworny N, Hupel TM, Weinberg J, Schemitsch EH: Influence of plate design on cortical bone perfusion and fracture healing in canine segmental tibial fractures. *Journal of Orthopaedic Trauma* 1999 March: 13(3): pp 178-186.

Lau JTC, Daniels TR: Tarsal tunnel syndrome: A review of the world's literature. *Foot and Ankle International* 1999 March: 20(3): pp 201-209.

Lau JTC, Daniels TR: The effects of tarsal tunnel release and stabilization procedures on tibial nerve tension in a surgically created pes planus foot. *Foot and Ankle International* 1998 November: 19: pp 770-777.

McKee MD, Bowden SH, King GJ, Patterson SD, Jupiter JB, Bamberger HB, Paksima N: The management of recurrent complex elbow instability with a hinged external fixator. *Journal of Bone and Joint Surgery* 1998 November: 80B: pp 1031-1036.

Sandhu JS, Gorczynski RM, Waddell J, Nguyen H, Squires J, Boynton EL, Hozumi N: Effect of interleukin-6 secreted by engineered human stromal cells on osteoclasts in human bone. *Bone* 1999 March: 24(3): pp 217-227.

Schemitsch EH, Turchin DC, Anderson GI, Byrick RJ, Mullen JB, Richards RR: Pulmonary and systemic fat embolization after medullary canal pressurization: A hemodynamic and histologic investigation in the dog. *Journal of Trauma* 1998 July: 45: pp 738-742.

Tang CL, Mahoney JL, McKee M, Richards R, Waddell JP, Louie B: Donor site morbidity following vascularized fibular grafting. *Microsurgery* 1999 January: 18: pp 383-386.

Turchin D, Schemitsch EH, McKee MD, Waddell JP: Do foot injuries affect the functional outcome of multiply injured trauma patients? *Journal of Orthopaedic Trauma* 1999 January: 13(1): pp 1-4.

Van Brenk B, Richards RR, Mackay MB, Boynton EL: A biomechanical assessment of ligaments preventing dorsoradial subluxation of the trapeziometacarpal joint. *Journal of Hand Surgery* 1998 July: 23(A): pp 607-611.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Bogoch ER: European Rheumatoid Arthritis Surgical Society Congress, Glasgow, Scotland, June 1999. Abnormal bone remodelling in inflammatory arthritis.

Bogoch ER: St. Joseph's Hospital, Peterborough, Ontario, May 1999. Identifying osteoporosis in the fracture clinic.

Bogoch ER: Visiting Professor, University of Western Ontario, London, Ontario, April 1999. Osteoporosis in the fracture clinic.

Bogoch ER: Universite de Montreal/Hotel-Dieu Hospital, Montreal, Quebec, January 1999. Osteoporosis in the fracture clinic.

Bogoch ER: McGill University Osteoporosis Journal Club, Montreal, Quebec, January 1999. Identifying osteoporosis in a fracture clinic population.

Bogoch ER: Dalhousie University, Halifax, Nova Scotia, October 1998. Osteoporosis in the fracture clinic.

Bogoch ER: Current Issues in Total Hip Arthroplasty, Brampton, Ontario, July 1998. (1) Painful hip arthroplasty, (2) The hip in juvenile rheumatoid arthritis.

Daniels TR: Pedorthic Association of Canada, Toronto, Ontario, April 1999. (1) Management of the adult flat foot, (2) Management of the hallux valgus deformity.

Daniels TR: Workshop, Fowler/Kennedy Sport Medicine Clinic, London, Ontario, January 1999. Case presentation: Post-traumatic ankle arthritis.

Daniels TR: American Orthopaedic Foot and Ankle Society/NSRA/PFA, Toronto, Ontario, January 1999. When the shoe fits: Basic foot anatomy and common foot problems.

Daniels TR: Journal Club Meeting, Workplace Safety and Insurance Board, Toronto, Ontario, November 1998. Management of plantar fasciitis.

Daniels TR: Visiting Professor, Royal University Hospital, Saskatoon, Saskatchewan, October 1998. (1) Developmental pes planus deformity, (2) Diabetic foot arthropathy, (3) Management of ankle osteoarthritis.

McKee MD: Charles H. Herndon International Symposium on Bone Allografts, Washington, D.C., April 1999. Treatment of trauma: OP-1 use.

McKee MD: AO/ASIF Advanced Controversies Course, Sun Valley, Idaho, March 1999. (1) Fracture dislocations about the elbow, (2) Four-part fractures of the proximal humerus, (3) Lab supervisor: Fracture dislocation of the elbow, (4) Lab instructor: Numerous labs, (5) Fireside chat: Difficult upper extremity fractures.

McKee MD: Wright Medical, Toronto, Ontario, February 1999. The use of an antibiotic impregnated bone substitute in the treatment of infected bony defects.

McKee MD: Instructional Course, American Academy of Orthopaedic Surgeons, Anaheim, California, February 1999. Stable internal fixation for fractures: Upper extremity.

McKee MD: Vail Orthopaedic Symposium, Vail, Colorado, January 1999. (1) A-C joint injuries: Acute management, (2) Distal radial ulnar joint instability, (3) Fractures and dislocations of the CMC joints, (4) Radial head fractures, (5) Moderator: Forearm injuries.

McKee MD: Toronto Critical Care Medicine Symposium, Toronto, Ontario, October 1998. Current management of pelvic fractures.

McKee MD: Orthopaedic Trauma Association, Vancouver, British Columbia, October 1998. (1) Upper extremity case presentations, (2) Discussion.

Richards RR: Harvard University, Boston, Massachusetts, June 1999. An update on outcome assessment for the shoulder and elbow.

Richards RR: University of Calgary, Calgary, Alberta, April 1999. (1) Chronic disorders of the forearm, (2) Approach to shoulder instability, (3) An update on outcome assessment for the shoulder and elbow, (4) Upper extremity reconstruction after irreparable brachial plexus injury: Techniques and outcome.

Richards RR: Visiting Professor, International Congress of Iranian Orthopaedic Association, Tehran, Iran, November 1998. (1) Session chair: Chronic disorders of the forearm, (2) Panel: Upper extremity pain: Outcome studies of tendon transfer for radial nerve paralysis, (3) Panel: Common shoulder disorders: Hemiarthroplasty for the treatment of proximal humeral fractures, (4) Surgical treatment for the patient with irreparable brachial plexus injury.

Richards RR: Zimmer Visiting Professor, Canadian Orthopaedic Association, University of Montreal, Montreal, Quebec, November 1998. (1) An approach to shoulder instability, (2) Orthopaedic management of irreparable lesions of the brachial plexus, (3) Chronic disorders of the forearm, (4) An update on elbow reconstruction.

Richards RR: Visiting Professor, Royal College of Physicians and Surgeons of Canada, Ottawa, Ontario, October 1998. (1) The role of the expert witness: The surgeon's perspective, (2) Legal pitfalls in upper extremity surgery.

Richards RR: American Society for Surgery of the Hand, Minneapolis, Minnesota, September 1998. (1) Course: Surgical treatment of the patient with radial nerve injury, (2) Surgical treatment of a patient with a brachial plexus injury.

Schemitsch EH: ABC Travelling Fellow, Auckland, New Zealand, May 1999. The pathophysiologic effect of pulmonary contusion in a canine model of fat embolism.

Schemitsch EH: ABC Travelling Fellow, Christchurch, New Zealand, May 1999. Open tibial fractures: Current concepts.

Schemitsch EH: ABC Travelling Fellow, Melbourne, Australia, May 1999. Nailing versus plating of humeral shaft fractures.

Schemitsch EH: ABC Travelling Fellow, Adelaide, Australia, May 1999. Nailing versus plating of humeral shaft fractures.

Schemitsch EH: ABC Travelling Fellow, Perth, Australia, May 1999. Nailing versus plating of humeral shaft fractures.

Schemitsch EH: ABC Travelling Fellow, Edinburgh, Scotland, April 1999. Open tibial fractures: Current concepts.

Schemitsch EH: ABC Travelling Fellow, London, England, April 1999. DC versus LC-DC plates: Is there a difference?

Schemitsch EH: ABC Travelling Fellow, Oxford, England, April 1999. DC versus LC-DC plates: Is there a difference?

Schemitsch EH: ABC Travelling Fellow, Bristol, England, April 1999. Current concepts of open tibial fractures.

Schemitsch EH: AO Fracture Course, Sun Valley, Idaho, March 1999. (1) Response to fracture and implant, (2) Response of cartilage to injury, (3) Case presentations.

Schemitsch EH: AO Fracture Course, Davos, Switzerland, December 1998. (1) Intramedullary splintage: A method of relative stability, (2) Supracondylar femoral fixation laboratory, (3) Case presentations.

Schemitsch EH: Ontario Orthopaedic Association, Toronto, Ontario, November 1998. (1) Current concepts in the management of open tibial fractures, (2) Nailing versus plating of humeral shaft fractures, (3) Missed fractures.

Schemitsch EH: International Society for Fracture Repair, Strasbourg, France, September 1998. Moderator: IM nailing session.

Schemitsch EH: Harborview Scientific Symposium, Seattle, Washington, July 1998. (1) The role of retrograde nailing of the femur, (2) Solutions for the obese trauma patient, (3) Combined tibial shaft: Pilon fractures.

Waddell JP: Challenges in Total Hip Replacement, Rome, Italy, May 1999. (1) Revision total hip replacement, (2) Periprosthetic fracture, (3) Video: Acetabular reconstruction techniques.

Waddell JP: SICOT, Sydney, Australia, April 1999. Chair: Hip: AVN and infection.

Waddell JP: Association for the Rational Treatment of Fractures, Sydney, Australia, April 1999. (1) Panelist: Ankle fractures, (2) Moderator: Malalignment in diaphyseal fractures and incongruity in intra-articular fractures.

Waddell JP: International Skeletal Trauma Conference, Flims, Switzerland, March 1999. (1) New aspects of trauma care: Canada, (2) The metabolic response to trauma, (3) Panel discussion: Polytrauma: Open fractures, (4) Outcome of acetabular fractures.

Waddell JP: Instructional Course, American Academy of Orthopaedic Surgeons, Anaheim, California, February 1999. Diaphyseal humeral fractures: Treatment options.

Waddell JP: Biological Breakthroughs in Musculoskeletal Diseases, Mater Misericordiae Hospital, Sydney, Australia, December 1998. (1) Current views on open fracture management, (2) The difficult primary hip replacement.

Waddell JP: Orthopaedic Trauma Association, Vancouver, British Columbia, October 1998. Functional treatment of humeral shaft fractures.

Waddell JP: International Society for Fracture Repair, Strasbourg, France, September 1998. Association for the Rational Treatment of Fracture Fixation presentation.

Waddell JP: Orthopaedic Guild, Toronto, Ontario, September 1998. History of total hip arthroplasty in Toronto.

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

A biomechanical analysis of methods of plate fixation of periprosthetic fractures. *Schemitsch EH, Waddell JP: Zimmer Canada (\$3,337 1997 - 1998).*

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. *McKee MD*, Schemitsch EH, Waddell JP, Leighton R, MacCormack R, Blachut P, O'Brien P, Meek R, Buckely R, Powell JN, Kreder H, Stephens D: Stryker Biotech (\$93,120 1997 - 2000).

A phase II study of hemolink to evaluate safety in anesthetized patients undergoing primary total hip and total knee arthroplasty. *Schemitsch EH*, Waddell JP, Belo S, Byrick R, Houston P, Moore T: Hemosol Incorporated (\$13,000 1997 - 1998).

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 bipolar hemiarthroplasty for displaced subcapital hip fractures. *Jaglal S*, Kreder H, Schatzker S, Williams J, Stephen D, Hu R, Schemitsch EH, McKee MD, Weiler P, Davey R: Medical Research Council of Canada (\$111,000 1997 - 1999).

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 influence of direct and indirect lung injury on pulmonary pathophysiology in trauma. *Schemitsch EH, Richards RR, Byrick RJ*: St. Michael's Hospital Research 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).

Bipolar versus three screws randomized clinical trial for displaced subcapital hip fractures. *Kreder HJ, McKee MD, Schemitsch EH, Schatzker J, Williams J, Jaglal S, Szalai J*: Medical Research Council of Canada (\$112,000 1997 - 1999).

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 1996 - 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).

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, Laverty 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, Hutchison C, Kreder H, Saleh K, Schemitsch EH, Szalai JP: Arthritis Society (\$64,783 1998 - 2001).

Ultrasound biomicroscopy of articular cartilage. *Foster S*, Bogoch ER: Medical Research Council of Canada (\$117,400 1996 - 1999).

HONOURS RECEIVED

Schemitsch EH: Samson Award, Canadian Orthopaedic Foundation, January 1999.

Schemitsch EH: Founders Medal, Canadian Orthopaedic Research Society (with Bhandari M, Adili A, Lachowski RJ, Shaughnessy JG), January 1999.

Schemitsch EH: ABC Travelling Fellow, January 1999.

DIVISION OF PLASTIC SURGERY

Dr. L.G. Douglas - Assistant Professor

Dr. J.L. Mahoney - Associate Professor (*Division Head*)

Dr. W.J. Peters - Professor

PUBLICATIONS

Brandon HJ, Peters WJ, Young VL, Jerina KL, Wolf CJ, Watson-Schorr M: Case study: Analysis of two Dow Corning breast implants removed after 28 years of implantation. *Aesthetic Plastic Surgery* 1999 February: 19(1): pp 40-48.

Dagum AB, Andrew KB, Schemitsch EH, Mahoney JL, Mahomed M, Blight KR: Salvage after severe lower-extremity trauma: Are the outcomes worth the means? *Plastic and Reconstructive Surgery* 1999 April: 103(4): pp 1212-1220.

Dvali L, Quan C, Pugash R, Poulin E, Peters WJ: Empyema necessitans presenting as a gas-forming cellulitis in an HIV+ man: Case report. *Canadian Journal of Plastic Surgery* 1999 March: 7(2): pp 53-56.

Embrey M, Adams EE, Cunningham B, Peters WJ, Young VL, Carlo GL: Review of the literature on the etiology of capsular contracture and a pilot study to determine the outcome of capsular contracture interventions. *Aesthetic Plastic Surgery* 1999 June: 23: pp 197-206.

Embrey M, Adams EE, Cunningham B, Peters WJ, Young VL, Carlo GL: Factors associated with breast implant rupture: Pilot of a prospective analysis. *Aesthetic Plastic Surgery* 1999 June: 23: pp 207-212.

Kamel M, Fornasier VL, Peters WJ: Cartilaginous metaplasia in the capsule of a Dacron-backed silicone-gel breast prosthesis. *Annals of Plastic Surgery* 1999 February: 42(2): pp 202-206.

Lugowski SJ, Smith DC, Lugowski J, Peters WJ, Semple J: Determination of silicon and silicone in tissue and body fluids: A need for standard reference materials. *Analytical Chemistry* 1998 September: 360(3-4): pp 486-488.

Mahoney JL, Kharailah E, Drakos D: Donor site morbidity following free tissue transfer: A preliminary survey. *Canadian Journal of Plastic Surgery* 1998 July: 6(2): pp 85-88.

Nechala P, Mahoney J, Farkas L: Digital two-dimensional photogrammetry: A comparison of three techniques of obtaining digital photographs. *Plastic and Reconstructive Surgery* 1999 June: 103(7): pp 1819.

Nechala P, Mahoney JL, Farkas LG: Maxillozygional anthropometric landmark: A new morphometric orientation point in the upper face. *Annals of Plastic Surgery* 1998 October: 41(4): pp 402-409.

Peters WJ, Phillips A: Buffalo hump and HIV-1 infection: Current concepts and treatment of a patient with the use of suction-assisted lipectomy. *Canadian Journal of Plastic Surgery* 1999 June: 7(3): pp 129-131.

Peters WJ, Pritzker KP, Smith DC, Fornasier V, Holmyward D, Lugowski S, Kamel M, Visram F: Capsular calcification associated with silicone breast implants: Incidence, determinants and characterization. *Annals of Plastic Surgery* 1998 December: 41(4): pp 348-360.

Peters WJ, Smith DC: Outcome after explantation of silicone-gel breast implants. *Annals of Plastic Surgery* 1998 November: 41(1): pp 102-103.

Young VL, Peters WJ, Brandon HJ, Jerina KL, Wolf CJ: Determining the frequency of breast implant failure requires sound scientific principles. *Plastic and Reconstructive Surgery* 1998 December: 102(4): pp 1295-1299.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Mahoney JL: Central Services Association, Toronto, Ontario, February 1999. Replantation and revascularization.

Peters WJ: Canadian Society of Plastic Surgeons, Montreal, Quebec, June 1999. Survival properties of breast implants and management of the woman with silicone-gel breast implants.

Peters WJ: Toronto Insurance Women's Association, Toronto, Ontario, March 1999. Recent advances in plastic surgery.

Peters WJ: Canadian Society for Aesthetic (Cosmetic) Plastic Surgery, Toronto, Ontario, October 1998. The current status of breast implant litigation.

Peters WJ: American Society of Plastic and Reconstructive Surgery, Boston, Massachusetts, October 1998. Panel member: Current questions about breast implants.

Peters WJ: Plastic Surgery Educational Foundation/American Society of Plastic and Reconstructive Surgery, Boston, Massachusetts, October 1998. Capsular calcification associated with silicone-gel and saline-filled breast implants.

Peters WJ: National Institutes of Health/Institute of Medicine, Washington, D.C., July 1998. Committee on the safety of silicone 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).

Calcification of silicone-gel breast implant capsules. *Peters WJ*: Plastic Surgery Educational Foundation/American Society of Plastic and Reconstructive Surgery (\$7,000 1997 - 1998).

Functional outcome following breast reduction. *Mahoney JL*: Canadian Society of Plastic Surgeons (\$10,000 1998 - 1999).

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

Peters WJ: Award for Advanced Education in Cosmetic Surgery, American Society for Aesthetic Plastic Surgery, May 1999.

DIVISION OF UROLOGY

Dr. L.K. Carr - Lecturer
Dr. R.J. Honey - Assistant Professor (*Division Head*)
Dr. A.G. Keresteci - Associate Professor
Dr. J.T. Rankin - Assistant Professor

PUBLICATIONS

Honey RJ: Assessment of a new tipless nitinol stone basket and comparison with an existing flat-wire basket. *Journal of Endourology* 1998 December: 12(6): pp 529-531.

Jewett MAS, Bombardier C, Logan AG, Psihramis KE, Wesley-James T, Mahoney JE, Luymes JJ, Ibanez D, Ryan MR, Honey RJ: A randomized controlled trial to assess the incidence of new onset hypertension in patients after ESWL therapy for asymptomatic renal calculi. *Journal of Urology* 1998 October: 160: pp 1241-1243.

Weir M, Honey RJ: Complete infundibular obliteration following percutaneous nephrolithotomy. *Journal of Urology* 1999 April: 161(4): pp 1274-1275.

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 (\$80,000 1998 - 2000).

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

PUBLICATIONS

Hill AB, Ameli FM: Fate of the iliac arteries after repair of abdominal aortic aneurysm with an aortobifemoral bypass graft. *Annals of Vascular Surgery* 1998 December: 12: pp 330-334.

O'Brien S, Mureebe L, Lossing A, Kerstein MD: Epidemiology, risk factors, and management of peripheral vascular disease. *Ostomy/Wound Management* 1998 September: 44(9): pp 13-18.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Ameli FM: Association of International Vascular Surgeons, Leogang, Austria, March 1999. Chair: Vascular problems.

Ameli FM: National Experts Bureau, Whistler, British Columbia, December 1998. Global approaches to treating vascular disease.

Ameli FM: Fabe Curry Memorial Day, Parry Sound Medical Society, Parry Sound, Ontario, September 1998. (1) Diagnosis and management of critical ischemia, (2) Controversies in the management of abdominal aortic aneurysms.

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 (*Acting*)
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
Dr. R. Maggisano — Vascular Surgery

Introduction

The Ontario Legislature passed Bill 51 on June 26, 1998, an Act to amalgamate Sunnybrook Health Sciences Centre with the Orthopaedic and Arthritic and Women s College Hospitals. While merger negotiations are ongoing, integration of the separate Departments of Surgery is proceeding smoothly and with considerable goodwill. Medical leadership issues (Division Heads) have been resolved and Dr. Bernard Goldman was appointed Surgeon-in-Chief of the Sunnybrook and Women s College Health Sciences Centre in June 1999. Drs. Lavina Lickley and John Cameron remain as Department Heads at their respective campus. A combined Department of Surgery planning retreat held in November 1998 dealt with physical and human resources anticipated 3-5 years hence at the time of the move to one site. Current discussions revolve around rationalization of resources and movement of patients, procedures and surgeons to the different sites to achieve maximal efficiency and utilization, as well as promote academic relationships and provide increased operating

time for new recruits and expanding programs. The Minister of Health formally opened the Ross Tilley Regional Burn Unit, a 14-bed unit, transferred from The Wellesley Central Hospital under the able leadership of Dr. Joel Fish on December 5, 1998, as part of the Health Restructuring Plan for the Sunnybrook campus.

Honours, Awards, Promotions and Appointments

The Dr. Marvin Tile Distinguished Service Awards of the Department of Surgery at the Sunnybrook campus were awarded to Dr. Barry McLellan for his significant contribution to the Trauma Program, to Ms. Kerry Marshall, Vice-President of Operations, for her dedication to the development of surgical programs (in particular the establishment of cardiac surgery), and to Dr. George Christakis for his commitment to the Department and Hospital regarding Medical Staff Association principles in merger discussions. Dr. Ron Kodama was awarded the A.W. Bruce Undergraduate Teaching Award for 1998-99. Dr. Sender Herschorn was awarded the Faculty of Medicine Colin R. Woolf Award for long term commitment to continuing education at the University of Toronto. He also chaired a section of the World Health Organization First International Consultation on Urinary Incontinence, the only Canadian to be so honoured. Dr. Gideon Cohen, cardiac surgery resident, was awarded the 1999 Canadian Research Award for Specialty Residents for his winning manuscript. The A.W. Harrison Teaching Awards were given to Drs. Chris Davreux (general surgery), Dr. Dennis Dipasquale (plastic surgery) and Dr. Gideon Cohen (cardiac surgery). Three of these awards were given to urology residents: Dr. Edward Matsumoto, Dr. Owen Prowse and Dr. Kenneth Pace. Dr. Mitchell Brown received the University of Toronto, Department of Surgery, Distinguished Educator Award for outstanding contribution to surgical skills education. Dr. Ted Ross received the Director's Teaching Award for the Peters-Boyd Academy and Dr. Mitchell Brown won the first award for teaching in the Clinical Skills Laboratory. Dr. Joel Fish was given the 1999 PAIRO Excellence in Clinical Teaching Award for the University of Toronto. Drs. Terry Axelrod and Joel Fish were nominees for the Peters-Boyd Academy Teaching Awards for 1999.

Dr. Fred Brenneman successfully passed his three-year review and was promoted to Assistant Professor. In addition, he was named Acting Head of the Trauma Program, after the resignation of Dr. Barry McLellan. The Division of Vascular Surgery was officially designated as a resident

teaching division within the University of Toronto and Dr. Robert Maggisano was appointed as Division Head. Dr. Gopal Bhatnagar successfully completed his three-year review. Dr. Stephen Fremes was named Acting Head of the Division of Cardiac Surgery. Dr. Terry Axelrod was promoted to Associate Professor, as well as being promoted to the position of Deputy Surgeon-in-Chief of the Sunnybrook and Women's College Health Sciences Centre. Dr. David Stephen was promoted to Assistant Professor.

Dr. Joel Fish was named Co-Chair of the Canadian Special Interest Group of the American Burn Association. Dr. Laurie Klotz remains Editor-in-Chief for the Canadian Journal of Urology. Drs. Marvin Tile and Joseph Schatzker completed the second edition of their important textbook *The Rationale of Operative Fracture Care*. Dr. Joseph Schatzker was elected to the prestigious position of President of the AO Foundation.

ORTHOPAEDIC AND ARTHRITIC CAMPUS

In 1998-99, the Orthopaedic and Arthritic Hospital was saddened by the death of one of its founders, Dr. James E. Bateman. Dr. Bateman's accomplishments as an orthopaedic surgeon and his contributions to the University of Toronto were remarkable. He was highly respected both nationally and internationally for his academic and clinical achievements, which included the development of a revolutionary hip replacement implant and advanced techniques in shoulder surgery. He will long be remembered by his patients and colleagues.

During the year, the Orthopaedic and Arthritic Hospital welcomed the full-time appointment to its staff of Dr. John Murnaghan and Dr. Barry Malcolm. Significant teaching activities have continued with emphasis on the Clinical Fellowship Program, focused 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, established in partnership with private enterprise.

There has been ongoing development of clinical research activities through participation in multicentre studies on the outcomes of joint replacement surgery, in collaboration with Toronto colleagues. There have also been expanded private partnerships in the conduct of controlled clinical trials related to pharmaceutical and technical advancements.

The formation of the Sunnybrook and Women's College Health Sciences Centre in 1999 has resulted in the establishment of one of the largest orthopaedic units in the country, and Drs. John Cameron and Terry Axelrod have been appointed co-leaders of the new Division. Work is underway to develop a vision and strategic plan for the unit and Musculoskeletal Program that will ensure continued excellence in clinical service, teaching and research.

SUNNYBROOK CAMPUS

Education

Undergraduate education is a major commitment of Sunnybrook surgeons and house staff, providing 278 hours of pre-clerkship teaching, 4 PBL tutors and 518.25 hours of clerkship phase I seminars. Dr. Gopal Bhatnagar is Co-ordinator for the surgical clerkship, for ASCM2 and Foundations of Medical Practice (Surgery) in the Peters-Boyd Academy.

Division of Cardiac Surgery

The Division remains extremely busy with 1,220 open-heart procedures performed during fiscal year 1998-99 with an increase of more than 100 cases planned. The primary and basic research activities of the Division during the past year have been: arterial conduits for coronary surgery (funded by the Medical Research Council of Canada), alternative methods of myocardial protection for urgent revascularization (funded by the Medical Research Council of Canada) and different valvular prostheses for aortic valve replacement (funded by the Heart and Stroke Foundation).

Clinical interests have related to epidemiologic and demographic risk factors in coronary surgery (Dr. Stephen Froles), the development of minimal access and off-pump techniques (Drs. Gopal Bhatnagar and Stephen Froles) and comparative evaluation of various aortic valves on left ventricular function (Drs. George Christakis and Bernard Goldman, who continue their roles as proctors for the FDA — mandated instruction of U.S. surgeons embarking on implantation of stentless valves).

Dr. Bernard Goldman as Surgeon-in-Chief and Dr. George Christakis as Head of SHUTC have had significant administrative responsibilities during the past year dealing with both on-site and merger issues. Dr. Bernard Goldman stepped down as Head of the Division and named Dr. Stephen Froles as the Acting Head. Two former Fellows, Drs. Labib Abouzahr and Dr. Charles Cutrara joined the cardiovascular staff at Sunnybrook in July 1998. Dr. Abouzahr has since assumed a position in Hamilton.

Division of General Surgery

General surgery has maintained its focus on trauma and oncology. Drs. Sherif Hanna and Hensley Miller have participated actively in the Trauma Program directed by Dr. Fred Brenneman. Their clinical studies on the use of ultrasound in the diagnosis and management of abdominal injuries continue to be supported by numerous grants. Specific interests in oncology are hepatobiliary, breast and GI cancers. The Liver Cryosurgery Program now in its early phase and, supported by the combined generosity of the hospital, patients and the Department of Surgery, has so far met with early clinical success and interest.

Opening of a limited number of intermediate care beds (Surgical Flow Through Unit) has facilitated early post-operative care of critically ill cancer patients.

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. He has been a teacher in the problem-based learning curriculum. Dr. David Rowed has continued to be active in skull base surgery and aspects of intra-operative monitoring. He too is a problem-based learning teacher. Dr. Rajiv Midha has been

successful in securing peer-reviewed funding for his laboratory research in repair and regeneration of peripheral nerves and attracts a wide referral of clinical cases in this subspecialty. Dr. Michael Schwartz has continued his work in radiosurgery with a review of the complications of the treatment of arteriovenous malformations and the outcome of patients after traumatic brain injury.

Dr. David Houlden has attracted peer-reviewed funding and graduate students for clinical research into aspects of neurophysiological monitoring continuing to provide service in this modality for several surgical services.

Dr. Ramani Ramaseshan of the Department of Medical Physics, and who is also appointed to the Division of Neurosurgery has developed new software to facilitate radiosurgical printing.

Division of Orthopaedic Surgery

During the academic year 1998-99, the Orthopaedic Division of the Sunnybrook and Women's College Health Sciences Centre officially amalgamated with the Orthopaedic and Arthritic Hospital to become the Orthopaedic and Arthritic Institute at the Sunnybrook and Women's College Health Sciences Centre. Drs. John Cameron and Terry Axelrod head this Division/Musculoskeletal Program as co-leaders within their respective divisions.

This program has representation at the Board of Directors of the Sunnybrook and Women's College Health Sciences Centre through the Musculoskeletal Committee of the Board. The Division is looking forward to the full development of the strategic plan and the beginning of construction of facilities that will bring us together under one roof as one of the largest functioning orthopaedic units in this country.

Dr. Gordon Hunter officially retired from active clinical practice. He has taken up a position with the Workplace Safety and Insurance Board as a consultant. Dr. Hunter will continue to monitor the trauma patients within the Trauma Program of this institution. Dr. Marvin Tile, although still active in a very busy clinical practice and participating fully in surgical endeavours, has officially retired from his University appointment.

Dr. Terry Axelrod was a guest of the Singapore Orthopaedic Association and was the Chair for the AO International Hand Course. Dr. Joseph Schatzker was an invited visiting professor at the Polish Orthopaedic and Trauma Society, as well as the Colombian Orthopaedic Society in Bogota, Columbia. Dr. Hans Kreder was a guest-visiting lecturer for the Ontario Orthopaedic Association Board of Directors retreat. All members of the Orthopaedic Division were active invited participants in many AO/ASIF courses.

Dr. Hans Kreder continues to obtain significant research grant funding. Dr. Joel Finkelstein has been successful in establishing the Sunnybrook spinal trauma prospective database with industry support. This database has become an integral part of the trauma assessment record. The Sunnybrook campus has initiated a combined fully integrated Spinal Injury Program in conjunction with the Division of Neurosurgery. This involves total care of the spinal cord injury patient from cervical spine to sacrum equally attended to by members of both the participating divisions.

The Orthopaedic Division in conjunction with the Department of Radiation Oncology has established a bone metastases prospective clinic at the Toronto Sunnybrook Regional Cancer Centre. This is an innovative program; the first of its kind in Canada that establishes a working prospective relationship between the radiation oncologists and orthopaedic surgeons for early intervention in patients with metastatic bone lesions.

Division of Plastic Surgery

This past year has been a time of transition for the Division of Plastic Surgery at the Sunnybrook and Women's College Health Sciences Centre. The Ross Tilley Burn Centre moved from The Wellesley Central Hospital to the Sunnybrook campus with Dr. Joel Fish as Medical Director. Dr. Rob Cartotto recently joined the Division from Queen's University as the second burn surgeon with an excellent reputation as a teacher. The Ross Tilley Burn Centre established the first provincial skin bank with a major donation from the Firefighters Association.

Dr. John Semple has assumed Head of the Division and is establishing a practice in breast reconstruction and skin cancer. Dr. Mitch Brown will be positioned primarily at the Women's College campus and will be continuing his practice in breast surgery and oncological reconstruction.

Dr. Oleh Antonyshyn is the Director of the Craniofacial Program and continues his research in three dimensional intra-operative navigational systems. Dr. Chris Forrest moved to The Hospital for Sick Children and has taken up the position of Director of the Craniofacial Unit there and remains a consultant to the program at the Sunnybrook campus. Dr. Jeff Fialkov joined the Division in the Craniofacial Program and has initiated a research project in the tissue engineering of bone.

The Division as a whole has developed a research component entitled, Advanced Reconstructive Tissue Engineering Centre (ARTEC). This is a special research initiative based at the Sunnybrook campus led by Dr. John Semple and Kim Woodhouse. The group will focus on using innovative tissue engineering for reconstruction of soft tissue defects following burns, trauma and cancer ablation.

Surgical Oncology

Surgical oncology is an established program within the Toronto Sunnybrook Regional Cancer Centre and the Sunnybrook and Women's College Health Sciences Centre, organized along site based lines. Dr. Ralph Gilbert (ENT) is the Director of Surgical Oncology and Dr. Carol Sawka is Medical Director of the Cancer Program and Chief Executive office of the Toronto Sunnybrook Regional Cancer Centre. Both work closely with the Department of Surgery.

Involvement of the surgeons 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 and Dr. Oleh Antonyshyn); the CNS site group (Dr. Michael Schwartz) and the melanoma site group (Dr. John Semple and Dr. Paul Binhammer). A surgical oncology retreat in the spring of 1999 redefined these unique and important liaisons between the Toronto Sunnybrook Regional Cancer Centre and the Sunnybrook and Women's College Health Sciences Centre, which continues to offer superb teaching opportunities and a fellowship in surgical oncology (Drs. Alexandra Easson and Jacqueline Crosby).

Trauma Program

The Trauma Program, under the leadership of Dr. Fred Brenneman, experienced an increase in trauma patient volumes in the past year caring for well over 800 seriously injured patients, 706 of those with an injury severity score >15. The Trauma Program continues to be the largest trauma centre in Canada. This high volume attracts clinical expertise, many opportunities for trauma research, and educational experiences for residents and fellows. The Trauma Program involves many members of various departments including surgery, anesthesia and medicine and involves all divisions within the Department of Surgery. Dr. Avery Nathens, currently at Harborview Hospital in Seattle, Washington, also a major trauma and burn centre will return next year to work with Dr. Fred Brenneman in the management of trauma patients and intensive care.

Division of Urology

The members of the Division of Urology have continued to report their clinical and research endeavours in a large number of publications in both books and journals. Dr. Sender Herschorn is the Director of the annual University of Toronto Urology Update which, at this point, is the most successful continuing medical education program in urology in Canada. He has continued his research activities in urinary incontinence and male erectile dysfunction. Dr. Laurence Klotz has continued to be extremely active in national and international cancer organizations. He is the principal investigator in a National Cancer Institute of Canada national trial in prostate cancer and is a key investigator in other trials. He was awarded the clinical poster prize at the European Association of Urology annual meeting. He was also elected Chair of the Global GU Group, an international consortium of co-operative clinical trial group chairs. Dr. Neil Fleshner is continuing his peer-reviewed funded research endeavours in prostate cancer as a principal investigator and in other research trials as well. He delivered a major address on prostate cancer to the plenary session of the annual meeting of the American Urological Association. Dr. Kodama became the Program Director for the University Urology Program. He continues his active role in education as chief examiner for the MCCQE Part II and is the co-ordinator of MOCOMP for the Canadian Urological Association.

Division of Vascular Surgery

Under the leadership of Dr. Robert Maggisano, this extremely busy Division continues its focus on evolving technologies in the management of thoraco-abdominal and traumatic aortic aneurysms, as well as peripheral vascular trauma and extracranial vascular reconstructions.

In collaboration, the Division has been awarded two separate \$100,000 grants for research in carotid disease. Dr. Maggisano is participating in the study of MRA imaging for grading carotid stenoses while Dr. Daryl Kucey is a co-investigator of the propranolol for small aortic aneurysms trial, as well as the Carotid Endarterectomy Health Sciences Research Program. The Division has also established a University of Toronto carotid study group. Currently the Division is involved in the development of a province-wide database for carotid endarterectomy, as well as infra-inguinal reconstructions.

WOMEN'S COLLEGE CAMPUS

We have now completed our first year as part of the amalgamated Sunnybrook and Women's College Health Sciences Centre. Much has been accomplished but there are still many details to be sorted out.

The plastic surgery and urology services have increased their role at the Women's College campus and plans are underway to recruit an additional general surgeon with a focus in breast disease. Dr. Mitch Brown continues his research in education. Dr. Ted Ross continued in his role as the University of Toronto Surgical Clerkship Supervisor responsible for the development and administration of the citywide surgical clerkship for Years 3 and 4. The surgeons at the Women's College campus contributed to the training of general and plastic surgery residents and participated extensively in the undergraduate curriculum. They taught in the Foundations of Medical Practice (PBL) and the Art and Science of Clinical Medicine (ASCM). They also undertook bedside clinics in abdominal assessment for students from the University Health Network and Women's College.

The results from the NSABP — Breast Cancer Prevention Trial were published this year. The Women's College campus was a participating centre and was also successful in a competitive application to become a

centre for the second Breast Cancer Prevention Trial (STAR — a study of tamoxifen and raloxifene).

We look forward to the challenges and rewards of our second year as part of the Sunnybrook and Women's College Health Sciences Centre.

ORTHOPAEDIC AND ARTHRITIC CAMPUS

DIVISION OF ORTHOPAEDIC SURGERY

Dr. H.U. Cameron - Associate Professor
Dr. J.C. Cameron - Assistant Professor (*Division Head*)
Dr. M. Ford - Lecturer
Dr. J.D. Gollish - Lecturer
Dr. H. Hall - Professor
Dr. R. Holby - 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

Anastakis DJ, Regehr G, Reznick RK, Cusimano M, Murnaghan JJ, Brown M, Hutchison C: Assessment of technical skills transfer from the bench training model to the human model. *American Journal of Surgery* 1999 January: 177(2): pp 167-170.

Cameron HU: The Cameron anterior osteotomy. In: *Revision Total Hip Arthroplasty* (Bono JV, McCarthy JC, Thornhill TS, Bierbaum BE, Turner RH, eds). Springer-Verlag, New York 1999: pp 285-286.

Cameron HU, Eren OT, Solomon M: Nerve injury in the prosthetic management of the dysplastic hip. *Orthopaedics* 1998 September: 21(9): pp 980-981.

Cameron HU, Smula V: Use of oblong socket in hip revision surgery. *Acta Chirurgiae Orthopaedicae et Traumatologiae Cechosl* 1999 March: 66: pp 7-9.

Cameron JC: Natural history of ACL tears. *The Practical Journal for Canadian Primary Care Physicians* 1999 January: 10: pp 1.

Cameron JC: What approach for hip clunks? Consider surgical release for chronic tendonitis of the elbow. *The Practical Journal for Canadian Primary Care Physicians* 1998 July: 9(10): pp 29.

Cameron JC, Kempenaar JW: Patellotibial fusion for patellar tendon rupture after total knee arthroplasty. *Journal of Arthroplasty* 1999 January: 14(1) pp 115-117.

Ford MH: Neck, spinal cord and back. In: *Handbook of Sports Injuries* (Bull RC, ed). McGraw-Hill Incorporated, Chicago 1999: pp 55-71.

Hall H, McIntosh G, Wilson L, Melles T: Spontaneous onset of back pain. *Clinical Journal of Pain* 1998 July: 14(2): pp 129-133.

Murnaghan JJ: New trends in total joint replacement. *Canadian Journal of Continuing Medical Education* 1999 March: 11(3): pp 1-6.

Wright CS: Hand and wrist injuries. In: *Handbook of Sports Injuries* (Bull RC, ed). McGraw-Hill Incorporated, Chicago 1999: pp 99-112.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Cameron HU: Visiting Professor, California Orthopaedic Association, Monterey, California, May 1999. (1) Treatment of recurrent dislocation, (2) S-ROM and revision techniques.

Cameron HU: Visiting Professor, Revision Hip Arthroplasty Conference, Montebello, Quebec, May 1999. (1) Tips and tricks of exposure in revision total hip replacement, (2) Acetabular reconstruction without bone, (3) Bi-body stem is best, (4) The deformed femur.

Cameron HU: Visiting Professor, Japanese Orthopaedic Association, Yokohama, Japan, April 1999. (1) Use of a noncemented proximally modular total hip stem, (2) Use of a constrained acetabular component in total hip replacement, (3) Long-term results of a proximally modular stem in type III revisions.

Cameron HU: Visiting Professor, Symposium Huftwechsel, Berlin, Germany, March 1999. (1) The S-ROM revision stem, (2) The oblong cup.

Cameron HU: Visiting Professor, International Hip and Knee Symposium, Basel, Switzerland, March 1999. (1) Acetabular revision without bone grafting, (2) The use of the S-ROM in hip revision.

Cameron HU: Visiting Professor, American Academy of Orthopaedic Surgeons, Anaheim, California, February 1999. Long-term results of type III hip revision using a proximally modular proximal ingrowth noncemented total hip replacement.

Cameron HU: Visiting Professor, North American Hip and Knee Symposium, Aspen, Colorado, January 1999. (1) Total knee replacement following high tibial osteotomy, (2) Total knee replacement following supracondylar femoral osteotomy, (3) Total knee replacement in a unicompartmental knee.

Cameron HU: Visiting Professor, Current Concepts in Joint Replacement, Orlando, Florida, December 1998. (1) Modular press fit femoral stems: When you know it's right, (2) The hip centre: A rationale concept in revision total hip arthroplasty: In opposition.

Cameron HU: Visiting Professor, International Conference on Tissue Banking, Malaysia, Asia, November 1998. (1) Advances and challenges in tissue transplantation, (2) Role of bone allograft in orthopaedic reconstruction.

Cameron HU: Visiting Professor, International Knee Symposium, South Africa, October 1998. (1) Total knee replacement following osteotomy or unicompartmental knee, (2) HA versus porous coating versus grit blast titanium as methods of fixation in total knee replacement, (3) Appropriate level of constraint in knee revision surgery, (4) Reflex sympathetic dystrophy following total knee replacement.

Cameron HU: Visiting Professor, Instructional Course and Symposium, Genoa, Italy, October 1998. (1) Treatment of bone loss in the femur with cementless modular stems, (2) Exposure options and extraction tips, (3) Management of extra-articular deformity in total knee replacement.

Cameron HU: Visiting Professor, International Knee Symposium, Barcelona, Spain, September 1998. (1) Management of extra-articular deformity in total knee arthroplasty, (2) Exposure options and extraction tips.

Cameron HU: Visiting Professor, Masterclass Scientific Program, Monte Carlo, Monaco, August 1998. (1) Management of the difficult primary total hip arthroplasty, (2) Hip dislocation, (3) Treatment of congenital hip dislocation, (4) Revision surgery without bone grafting.

Cameron JC: Association of Plastic and Orthopaedic Surgeons, Halifax, Nova Scotia, September 1998. (1) Rotational high tibial osteotomy for patellar instability, (2) Meniscus transplantation for osteoarthritis of the knee.

Cameron JC: 1999 McGill Orthopaedic Update Course, Montreal, Quebec, March 1999. (1) The knee: From the newborn to the elderly, (2) Extensor mechanism problems in the adult, (3) Meniscal allograft.

Hall H: Association of Medical Illustrators, Toronto, Ontario, July 1998. A simple sketch of back pain.

Hall H: University of California, San Diego, La Jolla, California, July 1998. (1) Orthopaedic therapeutic exercise, (2) Science and back pain: The broken promise.

Hall H: Strategies in Treatment and Care: The Failed Spine Patient, Baltimore, Maryland, August 1998. (1) Psychology of back pain, (2) Analysis of non-surgical alternative methods of treatment.

Hall H: Dewar Society, Toronto, Ontario, September 1998. Prognostic factors for illness behaviour in low back pain.

Hall H: New England Baptist Bone and Joint Institute, Boston, Massachusetts, October 1998. Indications and contraindications of spine surgery.

Hall H: Continuing Medical Education for Family Physicians, Canadian Back Institute/Physiotherapy and Rehabilitation Centre, Cornwall, Ontario, November 1998. (1) Management of peripheral injuries in family practice, (2) Management of repetitive strain injury in family practice.

Hall H: BritSpine 99, Manchester, England, March 1999. Early recognition and treatment of illness behaviour in low back pain.

Hall H: University of Saskatchewan, Saskatoon, Saskatchewan, May 1999. Thoracolumbar fixation particularly related to trauma.

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

Allograft meniscal dynamics and volumetric analysis using three dimensional reconstruction of MRI. *Marks PH:* Orthopaedic and Arthritic Hospital (\$8,900 1995 - 1999).

A multicentre, multinational, randomized, double-blind comparison of low molecular weight heparins in the prevention of DVT and symptomatic PE after elective hip replacement or revision. *Gollish JD:* Sanofi Incorporated (\$120,000 1999 - 2001).

A multicentre, multinational, randomized, double-blind comparison of low molecular weight heparins in the prevention of DVT and symptomatic PE after elective hip replacement or revision. *Gollish JD:* Organon Canada (\$120,000 1999 - 2001).

A non-randomized, multicentre, prospective evaluation of the Mitek BTB absorbable (PCA) cross pin device in anterior cruciate ligament reconstruction fixation. *Marks PH:* Pharmacia Incorporated (\$30,000 1998 - 2000).

Comparison of cemented versus cementless acetabular components in total hip arthroplasty. *Gollish JD:* Orthopaedic and Arthritic Hospital (\$16,600 1999 - 2001).

Evaluation of the metal on metal articulation with a total hip system: Cementless. *Cameron HU:* DePuy Orthopaedics (\$67,000 1999 - 2001).

Multicentre trial of HG hip prostheses with calcicoat ceramic coating.

Gollish JD: Zimmer Canada (\$126,750 1994 - 2000).

Thromboprophylaxis with different treatment regimens of low molecular weight heparin versus warfarin in total hip replacement. *Ford MH:*

Pharmacia Incorporated (\$192,000 1993 - 1998).

SUNNYBROOK CAMPUS

DIVISION OF CARDIAC SURGERY

Dr. L. Abouzahr - Lecturer
Dr. G. Bhatnagar - Lecturer
Dr. G.T. Christakis - Associate Professor
Dr. C. Cutrara - Lecturer
Dr. S.E. Fremes - Associate Professor (*Acting Division Head*)
Dr. B.S. Goldman - Professor

PUBLICATIONS

Bhatnagar G, Fremes SE, Christakis GT, Goldman BS: Early results using an ePTFE membrane for pericardial closure following coronary bypass grafting. *Journal of Cardiac Surgery* 1998 December: 13: pp 190-193.

Borger MA, Cohen G, Buth KJ, Rao V, Bozinovski J, Liaghati-Nasseir N, Feder-Elituv R, Sever J, Christakis GT, Bhatnagar G, Goldman BS, Cohen EA, Fremes SE: Multiple arterial grafts: Radial versus right internal thoracic arteries. *Circulation* 1998 November: II: pp 7-14.

Christakis GT, Buth KJ, Goldman BS, Fremes SE, Rao V, Cohen G, Borger MA, Weisel RD: Inaccurate and misleading valve sizing: A proposed standard for valve size nomenclature. *Annals of Thoracic Surgery* 1998 October: 66: pp 1198-1203.

Cohen G, Feder-Elituv R, Iazetta J, Bunting P, Mallidi H, Bozinovski J, Deemar C, Christakis GT, Cohen EA, Wong BI, McLean RD, Myers M, Morgan CD, Mazer D, Smith T, Goldman BS, Naylor C: Phase 2 studies of adenosine cardioplegia. *Circulation* 1998 November: pp 225-233.

Morsi A, Lau C, Nishimura S, Goldman BS: The development of sinoatrial dysfunction in pacemaker patients with isolated atrioventricular block. *PACE* 1998 July: 21: pp 1430-1434.

Oxorn DC, Edelist G, Goldman BS, Joyner CD: Echocardiography and excision of lipomatous hypertrophy of the interatrial septum. *Annals of Thoracic Surgery* 1999 January: 67: pp 852-854.

Rao V, Christakis GT, Sever J, Fremes SE, Bhatnagar G, Cohen G, Borger MA, Abouzahr L, Goldman BS: A novel comparison of stentless versus stented valves in the small aortic root. *Journal of Thoracic and Cardiovascular Surgery* 1999 March: 117(3): pp 431-438.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Bhatnagar G: Centenary Health Centre, Scarborough, Ontario, February 1999. Minimally invasive cardiac surgery.

Christakis GT: Rocky Mountain Surgical Society, Denver, Colorado, May 1999. Sizing issues in aortic valve surgery.

Christakis GT: Canadian Cardiovascular Society, Ottawa, Ontario, October 1998. Co-Chair: Surgery IV: Organ replacement/valvular surgery.

Christakis GT: St. Jude Medical Institute, St. Paul, Minnesota, September 1998. Clinical experience with the Toronto SPV valve.

Fremes SE: Mitchener Institute for Applied Health Sciences, Toronto, Ontario, April 1999. Surgical techniques for CABGs and valve repair/replacement.

Fremes SE: Hamilton General Hospital, Hamilton, Ontario, April 1999. Radial artery: The Sunnybrook experience and RAPS update.

Fremes SE: York County Hospital, Newmarket, Ontario, August 1998. Minimally invasive MIDCAB.

Fremes SE: Medtronic, Toronto, Ontario, August 1998. Cardioplegia.

Goldman BS: York County Hospital, Newmarket, Ontario, June 1999. Start up of a new cardiac surgical unit.

Goldman BS: Catholic Medical Center, Manchester, New Hampshire, May 1999. A comparison of clinical results for the Toronto stentless aortic bioprosthesis and the Medtronic freestyle valve.

Goldman BS: Shaare Zedek Medical Center/Hesselson Heart Center, Jerusalem, Israel, March 1999. The accumulated experience with the Toronto SPV.

Goldman BS: Cardiothoracic Surgery Conference, University of Rochester Medical Center, Rochester, New York, March 1999. Experience with the Toronto stentless porcine valve.

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, Shragge W, Gelfand ET, Hux J, Tu J: Medical Research Council of Canada (\$210,000 1996 - 1999).

Insulin cardioplegia for urgent coronary bypass surgery. *Christakis GT*, Weisel RD, Naylor CD: Medical Research Council of Canada (\$322,760 1998 - 2000).

Intra-operative transesophageal echo evaluation of LV function and valve function. *Christakis GT*, Goldman BS, Fremes SE: Daniels Family Research Trust (\$100,000 1994 - 1999).

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, Erret 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 (\$609,000 1996 - 1999).

HONOURS RECEIVED

Christakis GT: Marvin Tile Award, Sunnybrook and Women's College Health Sciences Centre, June 1999.

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. G.A. Taylor - Associate Professor

PUBLICATIONS

Ganguli SN, Hamilton P, Hanna SS, Morava-Protzner I: Small bowel intussusception secondary to osteogenic sarcoma metastasis. Canadian Association of Radiologists Journal 1999 June: 50(3): pp 170-172.

Kirkpatrick A, Brenneman F, McCallum A, Breeck K, Boulanger B: Prospective evaluation of the potential role of teleradiology in acute inter-hospital trauma referrals. Journal of Trauma 1999 April: 46(6): pp 1017-1023.

Scalea TM, Rodriguez A, Chiu WC, Brenneman FD, Fallon WF, Kato K, McKenney MG, Nerlich ML, Ochsner MG, Yoshii H: Focused assessment with sonography for trauma (FAST): Results from an international consensus conference. Journal of Trauma 1999 March: 46(3): pp 466-470.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Brenneman FD: Peel Memorial Hospital, Brampton, Ontario, April 1999. Blunt abdominal trauma.

Brenneman FD: Credit Valley Hospital, Mississauga, Ontario, April 1999. (1) Gunshot wounds, (2) Case presentation.

Brenneman FD: Hamilton General Hospital, Hamilton, Ontario, February 1999. Ultrasound for the trauma surgeon.

Brenneman FD: Headwaters Health Care Centre, Orangeville, Ontario, December 1998. Traumatic rupture of the aorta.

Brenneman FD: Ontario Association of General Surgeons, Ancaster, Ontario, November 1998. Ultrasound for the general surgeon.

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, Evans PJ, Hunter D, Midha R: Peripheral nerve revascularization: Histomorphometric study of small and large caliber grafts. *Journal of Reconstructive Microsurgery* 1999 January; 15: pp 183-190.

Chen JM, Houle S, Ang LC, Commins D, Allan K, Nedzelski J, Rowed D: A study of vestibular schwannomas using positron emission tomography and monoclonal antibody Ki-67. *American Journal of Otology* 1998 November; 19: pp 840-845.

Evans PJ, Mackinnon SE, Levi A, Wade JA, Hunter DA, Nakao Y, Midha R: Cold preserved nerve allografts: Changes in basement membrane, viability, immunogenicity, and regeneration. *Muscle and Nerve* 1998 November; 21: pp 1507-1522.

Midha R, Mackay M: Peripheral nerve suture techniques. In: Neurosurgical Operative Atlas (Rengachary SS, ed). American Association of Neurological Surgeons, New York 1999: pp 261-269.

Midha R, Munro CA, Ang L: End-organ reinnervation does not prevent axonal degeneration following immunosuppression withdrawal in nerve allografts. *Reconstructive Neurology and Neuroscience* 1998 September; 13: pp 163-172.

Phan N, Marras LC, Midha R, Rowed DW: Cervical myelopathy caused by hypoplasia of the atlas: Two case reports and review of the literature. *Neurosurgery* 1998 September; 43: pp 629-633.

Schwartz ML, Tator CH: Head injuries in athletics. In: *Oxford Textbook of Sports Medicine* (Harries M, Micheli LJ, Stanish WD, Williams C, eds). Oxford University Press, London 1998: pp 319-327.

Smurawska LT, Bowyer B, Rowed D, Maggisano R, Oh P, Norris JW: Changing practice and costs of carotid endarterectomy in Toronto, Canada. *Stroke* 1998 October; 29: pp 2014-2017.

Stuss DT, Binns MA, Carruth FG, Levine B, Brandys CE, Moulton RJ, Snow WG, Schwartz ML: The acute period of recovery from traumatic brain injury: Post-traumatic amnesia or post-traumatic confusional state? *Journal of Neurosurgery* 1999 April; 90: pp 635-643.

Taylor MD, Perry J, Zlatescu MC, Stemmer-Rachamimov AO, Ang LC, Ino Y, Schwartz ML, Becker LE, Louis DN, Cairncross JG: The hPMS2 exon 5 mutation and malignant glioma. *Journal of Neurosurgery* 1999 May; 90: pp 946-950.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Fazl M: Congress of Neurological Surgeons, Seattle, Washington, October 1998. The outcome of facet injuries at the cervical spine.

Midha R: American Society for Peripheral Nerve, Los Angeles, California, June 1999. Moderator.

Midha R: Ontario Medical Association, Toronto, Ontario, May 1999. Anatomy diagnosis and management of peripheral nerve problems around the head and neck.

Rowed DW: International Conference on Acoustic Neuroma, Rome, Italy, June 1999. Hearing preservation in removal of intracanalicular acoustic neuromas by the retrosigmoid approach.

Rowed DW: Royal College of Physicians and Surgeons of Canada/Atlantic Clinical Neurosciences Society, Halifax, Nova Scotia, May 1999. (1) Surgical intervention for headache and facial pain, (2) Intra-operative electrophysiological monitoring in neurosurgical procedures, (3) Nervous intermedius section in the management of chronic cluster headache.

Rowed DW: International Symposium on Predictive Oncology and Therapy, Nice, France, October 1998. Somatosensory evoked potential identification of sensorimotor cortex in removal of intracranial neoplasms.

Schwartz ML: Rotman Research Centre/Baycrest Centre for Geriatric Care, Toronto, Ontario, March 1999. Chair: Traumatic brain injury: Diagnosis, outcome and rehabilitation.

Schwartz ML: Montreal General Hospital, Montreal, Quebec, December 1998. Quality assurance and outcome evaluation in traumatic brain injury.

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

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, Flessner 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 (\$70,000 1998).

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.J.G. Stephen - Assistant Professor

Dr. M. Tile - Professor

PUBLICATIONS

Axelrod T, DeBoer D, Kreder HJ, Williams JI: Times in the surgeon's queue for elective primary total hip and knee replacements. In: *Patterns of Health Care in Ontario: Arthritis and Related Conditions* (Williams JI, Badley EM, eds). Institute for Clinical Evaluative Sciences, Toronto 1998: pp 133-143.

Boulanger B, Stephen DJG, Brenneman F: Thoracic trauma and early reamed intramedullary nailing of femur fractures: Are we doing harm? *Journal of Bone and Joint Surgery* 1999 March: 80B: pp 5.

Boyer MI, von Schroeder HP, Axelrod TS: Scaphoid nonunion with avascular necrosis of the proximal pole: Treatment with a vascularized bone graft from the dorsum of the distal radius. *Journal of Hand Surgery* 1998 October: 23B(5): pp 686-690.

Finkelstein JA, Chapman JR, Mirza S: Occult vertebral fractures in ankylosing spondylitis. *Spinal Cord* 1999 February: 37: pp 444-447.

Finkelstein JA, Desai B, Harrington R, Bernirschke S, Chapman J: The truss plate for fracture fixation. *Ortho Transactions* 1999 February: 22: pp 472.

Kim WY, Hearn TC, Osama S, Stephen DJG, Tile M: Biomechanical comparison between anterosuperiorly and anteriorly orientated screw purchase in pelvic external fixation. *Clinical Orthopaedics and Related Research* 1998 July: 16: pp 23-29.

Kreder HJ, Axcell T, Williams JI: Volumes and outcomes. In: *Patterns of Health Care in Ontario: Arthritis and Related Conditions* (Williams JI, Badley EM, eds). Institute for Clinical Evaluative Sciences, Toronto 1998: pp 127-133.

Kreder HJ, Williams JI, Jaglal S, Axelrod T, Stephen D: Are complication rates for elective primary total hip arthroplasty in Ontario related to surgeon and hospital volumes?: A preliminary investigation. *Canadian Journal of Surgery* 1998 December: 41(6): pp 431-437.

McKee MD, Garay M, Schemitsch EH, Kreder HJ, Stephen DJG: Irreducible fracture-dislocation of the hip: A severe injury with a poor prognosis. *Journal of Bone and Joint Surgery* 1999 March: 80B: pp 4.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Axelrod TS: AO/ASIF Nursing Continuing Education Course, Toronto, Ontario, May 1999. (1) Indications for open reduction internal fixation of proximal humeral and humeral shaft fractures, (2) Principles of fixation of distal humeral fractures, (3) Fixation of a distal humeral fracture.

Axelrod TS: American Academy of Orthopaedic Surgeons, Anaheim, California, February 1999. (1) Instructional course: Stable internal fixation for fractures: Upper extremity, (2) Chair - I.C.L., (3) A randomized controlled trial of indirect reduction and percutaneous fixation versus open reduction and internal fixation for displaced intra-articular distal radius fractures.

Axelrod TS: Singapore Orthopaedic Association, Singapore, Singapore, January 1999. (1) Course co-chair, (2) Diaphyseal and metaphyseal fractures: New developments in implants and instruments, (3) Neutralizing plate fixation, (4) Open injuries and complex injuries: Osteosynthesis in complex reconstruction, (5) Case discussions on open injuries and complex injuries, (6) Scaphoid and distal radius fractures: Dorsal approach to the scaphoid and distal radius, (7) Case discussions.

Finkelstein JA: AO/ASIF Comprehensive and Advanced Spine Course, Montreal, Quebec, July 1998. Post-traumatic kyphosis.

Kreder HJ: AO/ASIF Nursing Continuing Education Course, Toronto, Ontario, May 1999. Distal femoral fractures: Indications for treatment.

Kreder HJ: AO/ASIF Basic and Advanced Course, Sun Valley, Idaho, March 1999. Evidence based surgery in trauma.

Kreder HJ: AO/ASIF Advanced Principles in Fracture Management Course, Sun Valley, Idaho, March 1999. Outcome research in trauma.

Kreder HJ: Board of Directors Retreat, Ontario Orthopaedic Association, Barrie, Ontario, January 1999. (1) Arthritis and musculoskeletal care in Ontario: A review of the Institute for Clinical Evaluative Sciences report, (2) The Ontario trauma registry.

Schatzker J: SICOT, Sydney, Australia, April 1999. (1) Fractures of the ankle, (2) Chair: ARTOF symposium on fractures of the humerus.

Schatzker J: AO/ASIF Basic and Advanced Course, Sun Valley, Idaho, March 1999. (1) Comprehensive classification of fractures, (2) Fractures of the distal femur, (3) Intra-articular malunion and non-union, (4) Chair: Practice session and fireside discussion group.

Schatzker J: American Hip Society, Anaheim, California, February 1999. Acetabular revision utilizing rings and cages.

Schatzker J: American Academy of Orthopaedic Surgeons, Anaheim, California, February 1999. Acetabular revision utilizing rings and cages.

Schatzker J: Interior British Columbia Orthopaedic Update, Kelowna, British Columbia, January 1999. (1) Acetabular revision utilizing ARIZ and APC, (2) Chair: Workshop on acetabular revision, (3) Pre-operative planning of hip revision.

Schatzker J: AO/ASIF Basic and Advanced Course, Davos, Switzerland, December 1998. (1) Forty years of AO, (2) Mechanics and biology: The balance in fracture care, (3) Fracture classification of fractures, (4) What is new in the AO Foundation?, (5) The tibial plateau fracture, (6) The treatment of acute infection following internal fixation.

Schatzker J: Colombian Orthopaedic Society, Bogota, Colombia, October 1998. (1) The changes in fracture treatment, (2) The biological rationale for articular fracture treatment, (3) The supracondylar fracture treatment, (4) Supracondylar fracture of the femur, (5) The changing concepts of internal fixation.

Schatzker J: University of Wroclaw, Wroclaw, Poland, September 1998. (1) Visiting professor, (2) Guest of the President: The Polish Orthopaedic and Trauma Society.

Stephen DGS: Chicago Trauma Symposium, Chicago, Illinois, June 1999. (1) Emergency management of pelvic fractures, (2) Management of late complication of calcaneal fractures.

Stephen DGS: AO/ASIF Advanced Controversies in Fracture Care Course, Toronto, Ontario, May 1999. (1) Emergency management of pelvic fractures, (2) Emergency management of open tibial fractures.

Stephen DGS: American Academy of Orthopaedic Surgeons, Anaheim, California, February 1999. A randomized controlled trial of indirect reduction and percutaneous fixation versus ORIF for displaced intra-articular distal radius fractures.

Stephen DGS: Canadian Society of Orthopaedic Technologists, Toronto, Ontario, September 1998. Principles of hybrid frames.

Stephen DGS: Tallaght Hospital, Dublin, Ireland, September 1998. Open pelvic fractures.

Stephen DGS: Tullamore Hospital, Tullamore, Ireland, September 1998.
Management of gunshot femur fractures.

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

A randomized trial of bipolar versus internal fixation for displaced subcapital 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 HJ, Goel V, Schatzker J: Orthopaedic Trauma Association (\$30,000 1998 - 2002).

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 DS, Schemitsch EH, McKee M: Smith and Nephew Richards (\$5,000 1998 - 1999).

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).

Long-term outcomes in pelvic ring fractures. *Tile M*, Kreder HJ, Stephen DJG, Jaglal S: AO-Stiftung/ASIF Foundation (\$220,000 1997 - 2000).

Metastatic femoral lesions: Current practice and survival. *Stephen DJG*, Kreder HJ, Finkelstein JA: Institute for Clinical Evaluative Sciences (\$10,000 1999 - 2000).

Multicentre trial of distal radius fracture treatment. *Kreder HJ*: Orthopaedic Research and Education Foundation (\$144,760 1995 - 1999).

Predictors of outcome following revision total hip arthroplasty. *Davis A, Gross A, Kreder HJ, Agnidis Z, Hutchison C, Badley L, Schemitsch E, Gaffni A: Arthritis Society (\$64,834 1998 - 1999).*

Sunnybrook spinal trauma prospective database. *Finkelstein JA: Sofamor Danek (\$40,000 1999).*

Survival rates of individuals with metastatic spinal lesions following palliative surgery. *Finkelstein JA, Kreder HJ, Stephen DJG, Bondy S: 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 determination of tibial malrotation following intramedullary nailing randomized controlled trial of femoral nailing using fracture table versus manual traction. *Kreder HJ, Stephen DJG, 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 DJG, Schemitsch EH, McKee MD: Smith and Nephew Richards (\$5,000 1999 - 2000).*

DIVISION OF PLASTIC SURGERY

Dr. O.M. Antonyshyn - Associate Professor

Dr. P. Binhammer - Lecturer

Dr. J. Fialkov - Assistant Professor

Dr. J.S. Fish - Assistant Professor

Dr. J. Semple — Associate Professor(*Division Head*)

PUBLICATIONS

Antonyshyn O: Discussion: Endoscopic subcondylar fracture repair: Functional, aesthetic and radiographic outcomes. *Plastic and Reconstructive Surgery* 1998 October: 102: pp 1444-1445.

Antonyshyn O, O'Grady K, Thompson T, Weinberg M: Morphological results of orbital fracture reconstruction. In: *Craniofacial Surgery Proceedings, Seventh International Congress of the International Society of Craniofacial Surgery* (Whitaker LA, ed). Monduzzi Editore, Bologna 1998: pp 217-220.

Fialkov JA, Antonyshyn OM, Forrest CR, Farb R: Morphological and volumetric analysis of post-traumatic enophthalmos using combined imaging modalities. In: *Craniofacial Surgery Proceedings, Seventh International Congress of the International Society of Craniofacial Surgery* (Whitaker LA, ed). Monduzzi Editore, Bologna 1998: pp 221-223.

Forrest CR, Antonyshyn OM: Acute management of complex midface fractures. *Operative Techniques in Plastic and Reconstructive Surgery* 1998 August: 5: pp 188-200.

Gomez M, Fish JS: Hot tap water burns like flames: A proposed legislation to reduce tap water scald burns in Ontario, Canada. *Proceedings, Tenth Congress of the International Society for Burn Injuries* 1998 November: pp 22.

Rao J, Binhammer P: Coronal fractures of the body of the hamate: Two case reports. *Canadian Journal of Plastic Surgery* 1998 July: 6: pp 2.

Stimec J, Gomez M, Fish JS: The negative effect of government sponsored compensation and rehabilitation program on quality of life and return to work following thermal injury. *Journal of Burn Care Rehabilitation* 1999 January: 20(2): pp S194.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Antonyshyn O: University of Manitoba, Winnipeg, Manitoba, May 1999. (1) Post-traumatic enophthalmos: Etiology and principles of treatment, (2) Current techniques and outcomes in craniofacial reconstruction.

Antonyshyn O: Ukrainian Medical Association, Toronto, Ontario, March 1999. Craniofacial surgery: Principles and applications.

Antonyshyn O: Dalhousie University, Halifax, Nova Scotia, February 1999. (1) Post-traumatic enophthalmos, (2) Esthetic aspects of facial reconstruction, (3) Facial fracture reconstruction: Evolution of current techniques and outcomes.

Antonyshyn O: Atlantic Provinces, Moncton, New Brunswick, November 1998. (1) Craniofacial skeletal reconstruction: Surgical techniques and outcomes, (2) Uses of suture bone anchors in facial reconstruction.

Antonyshyn O: American Society of Maxillofacial Surgeons, Boston, Massachusetts, October 1998. Orbitozygomatic fracture outcome study.

Antonyshyn O: Fraser N. Gurd Lecturer, American Association for the Surgery of Trauma, Baltimore, Maryland, September 1998. Craniofacial trauma: Evolution of current techniques and outcomes.

Fish JS: Critical Care Program, Timmins and District Hospital, Timmins, Ontario, May 1999. Day in critical care: Answering those burning questions.

Fish JS: Back on Track Program, St. John's Rehabilitation Hospital, Toronto, Ontario, April 1999. Prevention of electrical burn injuries.

Fish JS: Peel Memorial Hospital, Newmarket, Ontario, October 1998.
Update on burn management.

Fish JS: Queensville Lecture Series, Toronto, Ontario, October 1998.
Inhalational burn management.

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

Advanced facial modelling 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).

An analytical study on silicone-gel filled breast implants. *Smith DC, Baines C, Lugowski S, MacDonald P, Peters W, Semple JL, Templeton D, Thompson M*: Dow Corning Corporation (\$650,000 1996 - 1999).

Outcomes research in breast reconstruction. *Semple JL, Baxter N, Goel V*: Canadian Society of Plastic Surgeons (\$10,000 1997 - 1999).

Prophylactic bilateral mastectomy in Ontario. *Narod SA, Semple JL, Lickley L, Esplen MJ, Metcalfe K*: Canadian Breast Cancer Foundation (\$40,000 1998 - 1999).

Zygoma fracture outcome study. *Antonyshyn O, Binhammer P, Forrest C, Manson P, Rohrich R, Hobar C, Gruss J*: AO-Stiftung/ASIF Foundation (\$138,000 1998 - 2000).

HONOURS RECEIVED

Fish JS: Pairo Excellence in Clinical Teaching Award, University of Toronto, May 1999.

DIVISION OF UROLOGY

Dr. N.E. Fleshner - Assistant Professor
Dr. S. Herschorn - Associate Professor (*Division Head*)
Dr. L. Klotz - Associate Professor
Dr. R.T. Kodama - Assistant Professor

PUBLICATIONS

Fleshner NE, Fair W, Huryk R, Heston WD: Vitamin E inhibits the high fat diet promoted growth of established human prostate LNCaP tumors in nude mice. *Journal of Urology* 1999 January: 161: pp 1651-1654.

Fleshner N, Klotz L: Diet, androgens, oxidative stress and prostate cancer susceptibility. *Cancer and Metastasis Reviews* 1999 January: 17: pp 325-330.

Fleshner NE, O'Sullivan M, Premdass C, Fair W: Clinical significance of small hypoechoic lesions in men with normal digital rectal examinations and prostate-specific antigen levels less than 10 ng/ml. *Urology* 1999 January: 53: pp 356-358.

Fleshner NE, Soloway S, Fair W: Repeat transrectal ultrasound-guided prostate biopsy: A strategy to improve the reliability of needle biopsy grading in patients with well-differentiated prostate cancer. *Urology* 1998 October: 52: pp 659-662.

Fleshner N, Trachtenberg J: Sequential androgen blockade in advanced prostate cancer. *Molecular Urology* 1998 July: 2: pp 201-207.

Gallagher RP, Fleshner NE: Prostate cancer: Individual risk factors. *Canadian Medical Association Journal* 1998 October: 159: pp 807-813.

Herschorn S: Investigation and management of female stress urinary incontinence. *Urology Index and Reviews* 1999 March: 2: pp 8-9.

Herschorn S: Old and new drugs for the overactive bladder. *Canadian Journal of Continuing Medical Education* 1999 March: 11: pp 121-132.

Herschorn S, Boccon-Gibod L, Bosch R, Bruschini H, Hanus T, Low A, Schick E: Surgical treatment of urinary incontinence in men. In: First International Consultation on Urinary Incontinence (Abrams P, Schussler B, Wein A, eds). Health Publications Limited, Plymouth 1999: pp 691-730.

Herschorn S, Hewitt RJ: The patient perspective of long-term outcome of augmentation cystoplasty for urinary incontinence. *Urology* 1998 October: 52: pp 672-678.

Klotz LH, Herschorn S: Early experience with intra-operative cavernous nerve stimulation with penile tumescence monitoring to improve nerve sparing during radical prostatectomy. *Urology* 1998 October: 52: pp 537-542.

Klotz L, McNeill I, Fleshner N: A phase 1-2 trial of diethylstilbestrol plus low dose warfarin in advanced prostate carcinoma. *Journal of Urology* 1999 January: 161: pp 169-172.

Nam RK, Fleshner N, Rakovitch E, Klotz L, Trachtenberg J, Choo R, Morton G, Danjoux C: Prevalence and patterns of the use of complementary therapies among prostate cancer patients: An epidemiologic analysis. *Journal of Urology* 1999 January: 161: pp 1521.

Rao A, Fleshner N, Agarwal S: Serum and tissue lycopene and biomarkers of oxidation in prostate cancer patients: A case-control study. *Nutrition and Cancer* 1999 April: 33: pp 159-164.

Zelefsky M, Leibel S, Gaudin P, Kutcher G, Fleshner N, Venkatramen E, Reuter V, Fair W, Ling C, Fuks Z: Dose escalation with three-dimensional conformal radiation therapy affects the outcome in prostate cancer. *International Journal of Radiation Oncology Biology Physics* 1998 July: 41: pp 491-500.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Fleshner N: Atlantic Winter Urological Meeting, Cornerbrook, Newfoundland, February 1999. *Nutrition and prostate cancer.*

Fleshner N: American Urological Association, Dallas, Texas, May 1999. Complementary and alternative medicine in prostate cancer.

Fleshner N: Visiting Professor, McGill University, Montreal, Quebec, May 1999. Nutrition and prostate cancer.

Fleshner N: Toronto Dieticians Association, Toronto, Ontario, June 1999. Prostate cancer.

Fleshner N: Canadian Urological Association, London, Ontario, February 1999. Session chair: Bladder cancer.

Herschorn S: Canadian Urological Association, London, Ontario, February 1999. Chair: Bladder dysfunction.

Herschorn S: Visiting Professor, University of Western Ontario, London, Ontario, January 1999. (1) Urinary incontinence, (2) Lower tract reconstruction.

Herschorn S: University of Calgary, Calgary, Alberta, November 1998. Advances in the management of urinary incontinence.

Herschorn S: St. Catharines Urologists, St. Catharines, Ontario, November 1998. Overactive bladder.

Herschorn S: Windsor Urologists, Windsor, Ontario, December 1998. Investigation and treatment of overactive bladder.

Herschorn S: Sudbury Area Family Practitioners and Specialists, Sudbury, Ontario. Urinary incontinence: Investigation and management.

Herschorn S: Visiting Professor, St. Lawrence Urology Group, Carling Lake, Quebec, February 1999. (1) Current concepts in the treatment of female stress urinary incontinence, (2) The use of bowel reconstruction of the lower urinary tract.

Herschorn S: North Network/Northern Ontario Remote Telecommunications Health Network, Toronto, Ontario, March 1999. Impotence: Treatment options including viagra.

Herschorn S: Etobicoke General Hospital, Etobicoke, Ontario, April 1999. Erectile dysfunction.

Herschorn S: Keynote Speaker, Prostate Cancer Forum, Canadian Cancer Society, St. John s, Newfoundland, May 1999. Prostate cancer: Dealing with incontinence.

Herschorn S: Canadian Urodynamics, London, Ontario, June 1999. Workshop: Investigations and management options for stress incontinence.

Kodama RT: Urology Nurses of Canada, Toronto, Ontario, September 1998. Urological trauma and urethral reconstructive surgery.

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, placebo-controlled study of IC351 (LY450190) administered "on demand" to patients with male erectile dysfunction. *Herschorn S:* Eli Lilly (\$25,000 1999).

A randomized trial of allogeneic collagen injection (Urologen) versus bovine collagen injection (Contigen) for the treatment of stress urinary incontinence due to intrinsic sphincteric deficiency in women without urethral hypermobility. *Herschorn S:* Collagenesis Incorporated (\$80,000 1998 - 1999).

A single-centre comparison of Elmiron with and without Polycitra-K in patients with interstitial cystitis. *Herschorn S*: Alza Pharmaceuticals (\$30,000 1999).

A study of spousal support in couples where a man has prostate cancer. *Gray R, Fitch M, Klotz L, Franssen E*: National Cancer Institute of Canada (\$141,354 1997 - 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).

Clinical efficacy and tolerability/safety of tolterodine prolonged release capsules and tolterodine immediate release tablets versus placebo: A randomized, double-blind, placebo-controlled, multinational study in patients with symptoms of overactive bladder. *Herschorn S*: Upjohn-Pharmacia (\$25,000 1999).

International prospective study of urethrin implant for the treatment of female urinary incontinence. *Herschorn S, Terry T*: Mentor Corporation (\$50,000 1998 - 1999).

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).

Treatment success, quality of life, and health economic assessment in an open randomized trial comparing tolterodine and oxybutynin in adults with urinary frequency, urgency, and/or urgency incontinence during naturalistic conditions for six months. *Herschorn S*: Upjohn-Pharmacia (\$25,000 1998).

HONOURS RECEIVED

Herschorn S: Colin R. Woolf Award, Faculty of Medicine, University of Toronto, November 1998.

DIVISION OF VASCULAR SURGERY

Dr. D.S. Kucey - Assistant Professor
Dr. R. Maggisano - Assistant Professor (*Division Head*)

PUBLICATIONS

Kucey DS, Bowyer B, Iron K, Austin P, Anderson G, Tu JV:
Determinants of outcome after carotid endarterectomy. *Journal of Vascular Surgery* 1998 December; 28: pp 1051-1058.

Smurawska LT, Bowyer B, Rowed D, Maggisano R, Oh P, Norris JW:
Changing practice and costs of carotid endarterectomy in Toronto, Canada. *Stroke* 1998 October; 29: pp 2014-2017.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Kucey DS: Ukranian Medical Association, Toronto, Ontario, March 1999.
Minimally invasive vascular surgery.

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).

Comparison of imaging modalities for carotid artery stenosis. *Farb RI, Richard I, Maggisano R:* Heart and Stroke Foundation (\$100,000 1996 - 1998).

WOMEN S COLLEGE CAMPUS

DIVISION OF GENERAL SURGERY

Dr. G. Hiraki - Assistant Professor
Dr. C.M.B. Holloway - Assistant Professor
Dr. H.L.A. Lickley - Professor
Dr. T.M. Ross - Associate Professor (*Division Head*)

PUBLICATIONS

Hanna S, Wedad M, Kahn HJ, Chapman JW, Fish EB, Lickley HLA, McCready DR: Pathologic characteristics of breast cancer that predict for local recurrence after lumpectomy alone. *Breast Journal* 1999 May: 5(2): pp 105-111.

Holloway MB: Benign breast disease: Approaching management. *Canadian Journal of Continuing Medical Education* 1999 March: 11(3): pp 65-80.

Lickley HLA: Can drugs prevent breast cancer? *Journal of Continuing Medical Education* 1999 January: 15: pp 191-193.

Mahoney L, Ali J, Burul C, Lickley HLA, Sidlofsky S, Taylor G, Ambus U, Koo J, McRitchie D, McCready D, Stoik G, Weizel H: Guideline for the management of breast lumps. *Canadian Journal of Surgery* 1998 December: 10(5): pp 476-477.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Lickley L: Wellspring, Toronto, Ontario, May 1999. Tamoxifen and breast cancer prevention.

Lickley L: Breast Cancer Information and Support Think Tank, Toronto, Ontario, April 1999. (1) Breast cancer treatment, (2) Treatment decision-making, (3) Rehabilitation and survivorship.

Lickley L: Breast Cancer Awareness Day, Canadian Breast Cancer Foundation, Toronto, Ontario, October 1998. Breast cancer prevention: Are drugs the answer?

Lickley L: Postgraduate Course, Royal College of Physicians and Surgeons of Canada/Canadian Association of General Surgeons, Toronto, Ontario, September 1998. The role of tamoxifen in the prevention 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).

Multidisciplinary breast cancer studies. *Lickley L*, Trudeau M, Hanna W, Kahn H, McCready D, Blondal J, Seth A, Holloway C: Women's College Hospital (\$80,000 1997 - 1998).

Ontario registry for studies of familial breast cancer. *Andrulis I*, *Boyd N*, Chart P, Kirkbride P, Cole D, Darlington G, Goodwin P, Haq R, Holloway E, Krieger N, Lickley L, McLaughlin J, Taylor K, Theis B, Wyatt P, Knight J, Sutherland D, Hodgkinson M, Aitkens S, Carter R, Chouinard E, Levine M, Ryan E: National Institutes of Health (\$3,212,776 1995 - 1999).

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, Weinberg M, Chong N, Levine R, Holowaty E: A cohort study of breast cancer risk in breast reduction patients. *Plastic and Reconstructive Surgery* 1999 May; 103: pp 1674-1681.

Tang CL, Brown MH, Levine R, Sloan M, Chong N, Holowaty E: Breast cancer found at the time of breast reduction. *Plastic and Reconstructive Surgery* 1999 May; 103: pp 1682-1686.

Tang CL, Brown MH, Levine R, Sloan M, Chong N, Holowaty E: A follow up study of 105 women with breast cancer following reduction mammoplasty. *Plastic and Reconstructive Surgery* 1999 May; 103: pp 1687-1690.

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

An analytical study on silicone-gel filled breast implants. *Smith DC, Baines C, Lugowski S, MacDonald P, Peters W, Semple JL, Templeton D, Thompson M*: Dow Corning (\$650,000 1996 - 1999).

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).

Outcomes in breast reduction surgery. *Levine R, Brown M, Hall J, Baxter N*: St. Joseph's Health Centre Research Foundation (\$6,465 1997 - 1998).

Outcomes research in breast reconstruction. *Semple JL, Baxter N, Goel V*: Canadian Society of Plastic Surgeons (\$10,000 1997 - 1999).

Prophylactic bilateral mastectomy in Ontario. *Narod SA, Semple JL, Lickley L, Esplen MJ, Metcalfe K*: Canadian Breast Cancer Foundation (\$40,000 1998 - 1999).

HONOURS RECEIVED

Brown MH: Distinguished Educator Award for Outstanding Contribution to Surgical Skills Education, Department of Surgery, University of Toronto, May 1999.

DIVISION OF UROLOGY

Dr. L.K. Carr - Lecturer
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. I.J. Harrington - Orthopaedic Surgery

Dr. R. MacMillan — Urology

The past year for the Toronto East General Hospital has been somewhat difficult with the forced resignation of the Chief Executive officer and a major restructuring of the hospital Board of Governors. For most of the year, the Hospital was managed by an interim Chief Executive officer, Mr. William MacLeod. The Toronto East General Hospital recently appointed Mr. Ron Mulchey as the new Chief Executive officer. Mr. Mulchey brings considerable experience to the new position, having had previous senior administrative roles at the Sunnybrook Medical Centre, Grand River Hospital in Kitchener and St. Paul's Hospital in Vancouver, British Columbia. There was considerable dissatisfaction with the management system introduced by the previous administration. This is currently being reviewed by a health care consultant firm. To-date, the Toronto East General Hospital has received two gastroenterologists and one general surgeon from The Wellesley Central Hospital. As well, there were two dentists transferred from the Toronto Western Hospital to the Toronto East General Hospital.

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.

The Division of Orthopaedic Surgery has become very popular with German medical students wishing to do electives in orthopaedic surgery, with four coming to the Toronto East General Hospital during the past year.

Dr. Wayne Tanner completed his term as President of the Medical Staff Association at the Toronto East General Hospital in June 1998. He is

currently Chair of the Specialists Coalition of Ontario and Section Chair for Vascular Surgery of the Ontario Medical Association. Dr. Tanner is Founder and Director of the Association of Vascular Surgeons of Ontario. This is a new association that was established in 1998.

Dr. Tom Gilas has remained active in the promotion of a surgical internet discussion list (Surginet) — a novel venue for international communication among surgeons. Dr. Gilas has been instrumental in establishing the Surginet Program.

Dr. Robert MacMillan was a Visiting Professor at McMaster University on October 23, 1998, discussing sexuality and fertility in the spinal cord injured. He also presented a paper at the American Spinal Cord Injury Association's annual meeting related to the efficacy of rinsing and microwave sterilization of plastic urinary catheters for use in intermittent catheterization. His current research activities involve the use of cranberry capsules in the prevention of urinary tract infections in spinal cord injury patients and the use of capsaicin in the treatment of high pressure neurogenic bladders.

Dr. Gianni Maistrelli presented new trends in hip arthroplasty at the Catholic University of Rome on September 24, 1998. He also participated in the Italian Orthopaedic Research Society, discussing the modes of failure in total knee arthroplasty. He also gave a presentation related to the biomechanics and neck geometry in total hip replacements at the International Hip Symposium in Rome on May 23, 1999.

Dr. William Forder is involved in a study of sildenafil for male erectile dysfunction and continues with work related to a comparison of low and high energy transurethral microwave thermography in patients with benign prostatic hypertrophy.

Dr. Paul Wong and Dr. Robert Mackenzie were promoted from associate active staff to full active staff.

Dr. Wong remains active in orthopaedic research and has recently completed a project involving the use of structural allografts for treating periprosthetic fractures about the hip and knee. His current research involves finite analysis of total hip arthroplasty and the biomechanics of roof re-enforcement ring in revision total hip arthroplasty.

Dr. Peter Weiler won the R.B. Salter Award for Excellence in Teaching. His research interests include the finite element analysis of hip fracture fixation devices and total hip arthroplasty.

Dr. Ian Harrington has completed his first term as Surgeon-in-Chief and will complete his second five-year term as Head, Division of Orthopaedic Surgery December 31, 1999.

The Toronto East General Hospital has recently completed its fund-raising campaign in order to provide a new operating room, obstetrical case room and out-patient facilities. Tenders have been let and construction is expected to begin within a few months.

It is expected that the Toronto East General Hospital will continue to function as a community teaching centre with an increasing role in the teaching of family practice medicine, general and orthopaedic surgery residents.

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 (*Division Head*)

Dr. W.J. Kraemer - Lecturer

Dr. G.L. Maistrelli - Associate Professor

Dr. P.J. Weiler — Lecturer

Dr. P. Wong - Lecturer

PUBLICATIONS

Harrington IJ, Barrington TW, Evans DC, Sekyi-Otu A, Tuli V:

Replacement of the radial head in the treatment of unstable elbow fractures: A long-term review. *Journal of Bone and Joint Surgery* 1999 May; 81B: pp S106.

Harrington IJ, Mahomed MN, Kearn T, Hamilton H: The effect of

implant temperature on the strength of the implant-cement interface.

Orthopaedic Transactions 1999 May; 22(4): pp 1070.

Harris WR, Harrington IJ: Does a painful condition of one upper

extremity cause painful overuse in the opposite "normal" one? (An aid to

compensation appeals). *Workers Safety Insurance Board Appeals Tribunal*

Manual 1999 February: pp 11-17.

Le Anh X, Otsuka N, Bhargava M, Cameron HU, Harrington IJ:

Fracture of the patella following total knee arthroplasty. *Orthopaedics* 1999

April; 22(4): pp 395-399.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Maistrelli GL: International Hip Symposium, Rome, Italy, May 1999.

Biomechanics and neck geometry in total hip replacements.

Maistrelli GL: Italian Orthopaedic Research Society, Rome, Italy,

September 1998. Modes of failure in total knee arthroplasty.

Maistrelli GL: Catholic University of Rome, Rome, Italy, September 1998.
(1) Design rationale of uncemented stem, (2) The importance of proper implant neck geometry, (3) Rationale for HA in cementless stems.

Weiler PJ: AO/ASIF Orthopaedic Trauma Course, Toronto, Ontario, May 1999. Pre-operative planning: A team approach.

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

Finite element analysis of the synergy hip prosthesis. *Weiler PJ:* Toronto East General Hospital Research Foundation (\$3,000 1998 - 1999).

HONOURS RECEIVED

Weiler PJ: R.B. Salter Award for Excellence in Teaching, Division of Orthopaedic Surgery, Department of Surgery, University of Toronto, November 1998.

DIVISION OF UROLOGY

Dr. W.C.F. Forder - Lecturer

Dr. R.D. MacMillan - Assistant Professor (*Division Head*)

UNIVERSITY HEALTH NETWORK

**Surgeon-in-Chief — Dr. P. Walker
(July 1, 1998 — March 31, 1999)**
**Surgeon-in-Chief - Dr. B.R. Taylor
(April 1, 1999 — June 30, 1999)**

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
Dr. M.A.S. Jewett — Urology
Dr. K.W. Johnston - Vascular Surgery

The Toronto Hospital consisted of the Toronto General Division and the Toronto Western Division established in 1987. As of April 1, 1999, the University Health Network was established, comprising the Toronto General Hospital, Toronto Western Hospital, Princess Margaret Hospital, and the Toronto Medical Laboratories. Dr. Paul Walker was Surgeon-in-Chief and Vice-President, Surgical Directorate until March 31, 1999, after which Dr. Bryce Taylor was appointed as Surgeon-in-Chief and Director of Surgical Services of the University Health Network.

Cardiac Surgery

This Division, the largest in the country, is both academically and clinically very productive. It welcomes Dr. Terry Yau and Dr. Stephanie Brister as new academic staff this year. Dr. Yau has been recruited as a surgeon/scientist and is investigating cardiomyocyte growth and autotransplantation.

The members of the Division continue to offer superlative clinical care to the Canadian public, and boast mortality and morbidity statistics which

have been consistently lower than that reported by the Society of Thoracic Surgeons.

The Toronto General Hospital continues to be a sought-after centre for cardiac surgery for large numbers of visiting graduate cardiovascular surgeons. At the same time, the Division members have acted as visiting professors to many universities around the world, and contribute to editorial boards of high-impact cardiovascular journals.

Clinical research has focused on interventions in patients with coronary artery disease, heart valve disease, and thoracic aortic aneurysms. In addition to cardiomyocyte growth, basic research is currently being conducted in the areas of myocardial preservation and cerebral protection during cardiac surgery.

Drs. Weisel, Feindel, Peniston, Yau and David all hold peer-reviewed and industrial grants to support their clinical and basic research. Grants have been awarded by the Medical Research Council of Canada, the Heart and Stroke Foundation and industry.

General Surgery

The Division of General Surgery has continued to develop programmatically in the areas of surgical oncology, transplantation, and surgical sepsis and critical care.

Drs. David McCready and Ulo Ambus have combined to create a breast centre at the Princess Margaret Hospital, and Dr. Lorne Rotstein has contributed significantly to the development of head and neck cancer surgery at that institution. The hepatobiliary group, in collaboration with a Mount Sinai Hospital surgeon, is successfully strengthening ties with the medical oncology and radiation oncology colleagues at the Princess Margaret Hospital, and has recently been recognized as the Ontario leader in operative results after major pancreatic surgery.

Dr. John Marshall is an internationally recognized clinical researcher in critical care, and heads the clinical research program in the intensive care units at the University Health Network. Dr. Ori Rotstein, in addition to his duties as Division Head, remains Director of Research for the University Department of Surgery and Associate Director of the Institute of Medical

Science, at the same time as leading activities in his productive basic science laboratory.

Dr. Richard Reznick assumed the position of Vice-President of Education at the University Health Network, and continues to spearhead educational research at the Centre for Research in Education based at the Toronto General Hospital.

Division members have successfully captured grants from the National Cancer Institute of Canada, the Ministry of Health, the Physicians Services Incorporated Foundation, the Medical Research Council of Canada and industry.

Neurosurgery

The members of this outstanding Division continue to nurture their national and international reputations in clinical care and research. Foci of activity are in cerebrovascular disease, oncology, movement disorders, and spinal cord research. Dr. Mark Bernstein was recently reappointed as Division Head after a successful review, and Dr. Charles Tator completed his ten year term as Chair of Neurosurgery at the University of Toronto, a post assumed by Dr. Jim Rutka at The Hospital for Sick Children.

Seven of the nine neurosurgeons run basic science research laboratories, and are funded by research grants from the National Institutes of Health, the National Cancer Institute of Canada, the Medical Research Council of Canada, the Heart and Stroke Foundation, the Neurofibromatosis Society, the Ontario Neurotrauma Foundation, the Parkinson's Foundation, the International Spinal Research Trust, the Medical Research Council of Canada Clinician Scientist Awards (three), the Ontario Ministry of Health Career Scientist Award and the Pencer Trust.

Current University Health Network neurosurgeons hold the Ricard Chair in Cerebrovascular Surgery (Dr. Chris Wallace); the Tasker Chair in Stereotactic and Functional Neurosurgery (Dr. Andres Lozano); the Robert O. Lawson Chair in Neural Repair and Regeneration (Dr. Michael Fehlings); and until June 30, 1999, the Dan Family Chair in Neurosurgery (Dr. Charles Tator).

Many local, national, and international prizes have been awarded to divisional members in the last year.

Orthopaedic Surgery

Orthopedic surgeons at the University Health Network continue their clinical activities and clinical research in joint arthroplasty and sports medicine. Dr. Nizar Mahomed is successfully carrying out his research program, and the Division remains a popular choice for medical students, residents, and clinical fellows in orthopaedics.

In addition to its other activities, the Division supports the development of an interdisciplinary spine program along with neurosurgery, and will collaborate with that division in the recruitment of spine surgeons in the near future. Funding for research comes from the Physicians Services Incorporated Foundation, the Arthritis Society, the Medical Research Council of Canada, the Canadian Orthopedic Foundation, the Agency for Health Care Policy and Research and industry.

Plastic Surgery

The members of the Division of Plastic Surgery made valuable contributions to the Head and Neck Program, the Hand Program, and the Healthy Connections Program at the Toronto Western Hospital site. Dr. Peter Neligan was appointed to the first Wharton Chair in Reconstructive Plastic Surgery. The Hand Program continues as a unique combination of plastic and orthopaedic surgeons to form an outstanding referral centre for a variety of clinical hand problems. In addition, the research interests of Dr. Herb von Schroeder in osteoblast biology and chondrogenesis complement the clinical activities.

Dr. Ralph Manktelow relocated his practice in facial nerve reconstruction to the Toronto General Hospital, and Dr. Brent Graham was subsequently appointed as the Interim Director of the Hand Program. Dr. Dimitri Anastakis continued his diverse efforts in hand surgery, educational research, and operational aspects of surgery at the Toronto Western Hospital.

Research funding was granted from the Medical Research Council of Canada, the Physicians Services Incorporated Foundation and industry.

Thoracic Surgery

The Division of Thoracic Surgery welcomes two new members, Drs. Gail Darling and Michael Johnston, as the two Divisions from the Toronto General and Mount Sinai Hospitals merged to form a six-member team. This year saw the retirement of Dr. Griff Pearson who has been instrumental in the birth and development of thoracic surgery as a separate specialty in North America.

The Lung Transplantation Program, along with innovations in lung volume reduction surgery, have combined to address the problem of advanced lung disease. The Transplantation Program continues to be very successful clinically, and the research work of Dr. Shaf Keshavjee has been recognized nationally and internationally.

The establishment of thoracic surgery as a viable section of the Department of Surgical Oncology at the Princess Margaret Hospital will be a significant step in enhancing treatment of thoracic malignancies. Three surgeons, Drs. Winton, Darling and Johnston have now moved their offices to the Princess Margaret Hospital.

Research funding has been awarded from the National Sanatorium Association, the Physicians Services Incorporated Foundation, the Canadian Cystic Fibrosis Foundation and industry.

Urology

The members of the Division of Urology continued to make important advances in clinical surgery and research, especially in the areas of oncology and transplantation. Dr. John Trachtenberg is holder of the Fleck/Tanenbaum Chair, and was also appointed as the first Director of the Prostate Centre at the Princess Margaret Hospital. Other important clinical areas include the neurogenic bladder and impotence, foci of interest for Drs. Magdy Hassouna and Sid Radomski respectively.

Research funding in the Division of Urology is currently held from the Medical Research Council of Canada, the Spinal Cord Research Foundation, the National Cancer Institute of Canada, the Canadian Uro-Oncology Group and industry.

Vascular Surgery

The members of the Division of Vascular Surgery are making significant contributions in clinical surgery, research and education. The Vascular Centre and participating surgeons serve those patients especially in need of complex vascular management. In addition, residents from a variety of the University of Toronto surgical programs receive outstanding practical training.

Advanced diagnostics in vascular disease, hemodynamics and atherosclerosis, clinical trials in surgical treatment of vascular disease, basic science involving the neutrophil-mediated cardiomyocyte cytotoxicity, and studies in ischemia/reperfusion injury all continue to be foci of important research work in the Division.

Dr. Barry Rubin received the Wylie Fellowship in academic vascular surgery, and the other members of the Division were honoured with a variety of invited visits and professorships.

Research funding was from the Heart and Stroke Foundation, the Medical Research Council of Canada, the Physicians Services Incorporated Foundation and industry

DIVISION OF CARDIAC SURGERY

Dr. R.J. Baird - 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

PUBLICATIONS

Bach DS, David T, Yacoub M, Pepper J, Godman B, Wood J, Verrier E, Petracek M, Aldrete V, Rosenbloom M, Azar H, Rakowski H: Hemodynamics and left ventricular mass regression following implantation of the Toronto SPV stentless porcine valve. *American Journal of Cardiology* 1998 November: 82: pp 1214-1219.

Borger MA, Ivanov J, Weisel RD, Peniston CM, Mickleborough LL, Rambaldini G, Cohen C, Rao V, Feindel CM, David TE: Decreasing incidence of stroke during valvular surgery. *Circulation* 1998 November: 98(II): pp 137-143.

Borger MA, Weisel RD: Calcium channel blockers in myocardial and cerebral ischemia: A clinician's review from bench to bedside. *Canadian Journal of Cardiology* 1999 January: 15(3): pp 333-340.

Butany J, Yu W, Silver MD, David TE: Morphologic findings in explanted Hancock II porcine bioprostheses. *Journal of Heart Valve Disease* 1999 January: 8: pp 4-15.

Cheng D, David TE: Perioperative Care in Cardiac Anesthesia and Surgery (Cheng D, David TE, eds). Landes Bioscience, Texas 1999.

Cheng D, David TE: Stentless Bioprostheses (Huysmans HA, David TE, Westaby S, eds). Isis Medical Media Limited, Oxford 1999.

Cohen G, David TE, Ivanov J, Armstrong S, Feindel CM: The impact of age, coronary artery disease, and cardiac comorbidities on late survival after bioprosthetic aortic valve replacement. *Journal of Thoracic and Cardiovascular Surgery* 1999 February: 117: pp 273-284.

Cohen G, Shirai T, Weisel RD, Rao V, Merante F: Optimal myocardial pre-conditioning in a human model of ischemia and reperfusion. *Circulation* 1998 November: 98(II): pp 184-196.

David TE: Ventricular septal rupture: Repair by infarct exclusion. In: *Ischemic Heart Disease: Surgical Management* (Buxton B, Frazier OH, Westaby S, eds). Mosby International Limited, London 1999: pp 298-301.

David TE: Surgery of aortic valve. *Current Problems in Surgery* 1999 June: 36: pp 426-501.

David TE: Surgery for acute type A aortic dissection. *Operative Techniques in Thoracic Surgery and Cardiovascular Surgery* 1999 February: 4: pp 2-12.

David TE, Armstrong S, Ivanov J, Barnard S: Surgery for acute type A aortic dissection. *Annals of Thoracic Surgery* 1999 June: 67: pp 1999-2001.

David TE, Armstrong S, Ivanov J, Webb GD: Aortic valve sparing operations: An update. *Annals of Thoracic Surgery* 1999 June: 67: pp 1840-1842.

David TE, Puschmann R, Ivanov J, Bos J, Armstrong S, Feindel CM, Scully HE: Aortic valve replacement with stentless and stented porcine valves: A case-match study. *Journal of Thoracic and Cardiovascular Surgery* 1998 August: 116: pp 236-241.

Gordon RS, Ivanov J, Cohen G, Ralph-Edwards AC: Permanent cardiac pacing after a cardiac operation: Predicting the use of pacemakers. *Annals of Thoracic Surgery* 1999 January: 66: pp 1698-1704.

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Li R-K, Yau TM, Sakai T, Mickle DAG, Weisel RD: Cell therapy to repair broken hearts. *Canadian Journal of Cardiology* 1998 September: 14: pp 735-744.

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Moshkovitz Y, David TE, Caleb M, Feindel CM, de Sa MPL: Circulatory arrest under moderate systemic hypothermia and cold retrograde cerebral perfusion. *Annals of Thoracic Surgery* 1998 October: 66: pp 1179-1184.

Peniston CM: Editorial comment: Nontransmural laser treatment incompletely denervates canine myocardium. *Circulation* 1998 November: 98(II): pp 72.

Ralph-Edwards A, Anesthesia and Cardiac Surgery at The Toronto Hospital: Aortocoronary bypass: Surgical technique including cannulation techniques. In: *Perioperative Care in Cardiac Anesthesia and Surgery* (Cheng DCH, David TE, eds). Landes Bioscience, Texas 1999: pp 99-105.

Rao V, Komeda M, Weisel RD, Cohen G, Borger MA, David TE: Should the pericardium be closed routinely after heart surgery? *Annals of Thoracic Surgery* 1999 February: 67: pp 484-488.

Reardon MJ, David TE: Mitral valve replacement with preservation of the subvalvular apparatus. *Current Opinion in Cardiology* 1999 March: 14: pp 104-110.

Reardon MJ, David TE: Stentless xenograft aortic valves. *Current Opinion in Cardiology* 1999 March: 14: pp 84-89.

Scully HE: President's page: Federal health budget 1999: Part 1: A step in the right direction. *Canadian Journal of Cardiology* 1999 April: 15(4): pp 269.

Scully HE: President's page: Federal health budget 1999: Part 2: Health research, health information and prevention. *Canadian Journal of Cardiology* 1999 May: 15(5): pp 525-526.

Scully HE: President's page: February: Heart month: Heart on the hill and the health heart kit. *Canadian Journal of Cardiology* 1999 March: 15(3): pp 527-528.

Scully HE: President's page: Access to cardiac resources in Canada: Who is responsible? Who is liable? *Canadian Journal of Cardiology* 1999 February: 15(2): pp 31-32.

Scully HE: President's page: Who is responsible for access to cardiac resources in Canada? *Canadian Journal of Cardiology* 1999 January: 15(1): pp 1199.

Scully HE: President's page: Ottawa in October: Successful annual general meeting. *Canadian Journal of Cardiology* 1998 December: 14(12): pp 1430-1440.

Scully HE: President's page: Challenges and opportunities. *Canadian Journal of Cardiology* 1998 November: 14(11): pp 1319-1320.

Van Arsdell GS, David TE, Butany J: Autopsies in acute type A aortic dissection: Surgical implications. *Circulation* 1998 November: 98(II): pp 299-302.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

David TE: World Symposium on Heart Valve Disease, London, England, June 1999. Aortic valve surgery: Where we are and where we shall go?

David TE: Visiting Professor, King's College Hospital, London, England, June 1999. Aortic valve replacement with stentless porcine bioprosthesis: Indications, techniques and long-term results.

David TE: Morton Halpern Excellence in Cardiology Lecture, Cedars Medical Center, Miami, Florida, April 1999. New trends in aortic valve surgery.

David TE: American Association for Thoracic Surgery, New Orleans, Louisiana, April 1999. (1) Developing the academic surgeon - A symposium: Surgical innovation, (2) Controversies in cardiothoracic surgery debate: Aortic valve size makes a difference in early and late outcome (pro).

David TE: International Symposium on Redo Cardiac Surgery, New Orleans, Louisiana, April 1999. (1) Tricuspid valve repair and replacement, (2) Use of pulmonary autograft and homograft in redo cardiac surgery, (3) Factors influencing mortality and success of redo mitral surgery.

David TE: Brazilian Society of Cardiovascular Surgery, Fortaleza, Brazil, April 1999. (1) Functional anatomy of the aortic root, (2) Surgery for infective endocarditis.

David TE: Cardiac Surgery Symposium for Thoracic Surgery Residents, St. Jude Medical, Minneapolis, Minnesota, March 1999. Functional anatomy of the aortic root and its implications in cardiac surgery.

David TE: Practice of Evidence-Based Cardiology for the Clinician Symposium, McMaster University, Hamilton, Ontario, February 1999. Established and new surgical approaches in valvular heart disease.

David TE: Society of Thoracic Surgeons, San Antonio, Texas, January 1999. Meet the experts session: Stentless or stented bioprosthesis?

David TE: Evolving Techniques and Technologies in Minimally Invasive Cardiac Surgery, San Antonio, Texas, January 1999. Aortic valve sparing techniques in the era of less invasive surgery: What's new?

David TE: Cardiovascular Conference at Snowmass, American College of Cardiology, Snowmass, Colorado, January 1999. (1) Long-term observations on the Hancock II bioprosthesis, (2) Myocardial resection in cardiomyopathy, (3) Thoracic aneurysms.

David TE: New York Hospital/Cornell Medical Center, New York, New York, January 1999. A prospective randomized trial on St. Jude and Carbomedics valves.

David TE: DeBoer Lecturer, St. Francis Hospital, Chicago, Illinois, November 1998. New procedures to treat aortic valve disease.

David TE: Postgraduate Course in Cardiac Surgery, American College of Surgeons Clinical Congress, Orlando, Florida, October 1998. Stentless bioprosthetic aortic valves: Indications, techniques and results.

David TE: C. Walton and Richard Lillehei Surgical Society, Minneapolis, Minnesota, October 1998. Aortic valve replacement with the Toronto SPV bioprosthesis.

David TE: South Atlantic Cardiovascular Society, Hilton Head, South Carolina, August 1998. Aortic valve surgery.

David TE: Victor Chang Lecturer, Cardiac Society of Australia and New Zealand, Perth, Australia, August 1998. (1) Surgery for end-stage ischemic cardiomyopathy, (2) Mitral valve repair, (3) Aortic valve sparing operations in patients with aortic root aneurysm.

Feindel CM: Peak Performance XII, Medtronic, Lake Louise, Alberta, February 1999. Aortic valve sparing techniques in an era of less invasive surgery.

Feindel CM: Society of Thoracic Surgeons, San Antonio, Texas, January 1999. New xenograft valves.

Mickleborough LL: American Heart Association, Boston, Massachusetts, April 1999. Moderator: Issues in special populations.

Mickleborough LL: American Association for Thoracic Surgery, New Orleans, Louisiana, April 1999. Moderator: Minimally invasive CABG is best done on a beating heart rather than a stopped heart.

Mickleborough LL: McMaster University Symposium: The Practice of Evidence-Based Cardiology for the Clinician, Toronto, Ontario, February 1999. Revascularization strategies in chronic stable CAD: CABG versus PTCA.

Mickleborough LL: New Era Cardiac Care: Innovation and Technology, Scottsdale, Arizona, January 1999. (1) Operative intervention for cardiac failure, (2) Aneurysm repair: Modified linear closure technique: Does heavy calcification increase operative risk?, (3) Session moderator: Bio bypass.

Mickleborough LL: American Heart Association, Anaheim, California, November 1998. (1) Controversies in coronary revascularization, (2) Arrested heart.

Mickleborough LL: Canadian Cardiovascular Society, Ottawa, Ontario, October 1998. (1) Surgery for advanced heart failure, (2) Standard surgical techniques for the treatment of heart failure.

Mickleborough LL: McGill University, Montreal, Quebec, September 1998. Results of aortocoronary bypass grafting in men versus women.

Scully HE: Federal Medical Licensing Bureau of Canada, Digby, Nova Scotia, June 1999. Withdrawal of medical services: Our recent history: Is it avoidable or doomed to repeat?

Scully HE: New Brunswick Health Care Association, Fredericton, New Brunswick, May 1999. Challenges and solutions: A national perspective.

Scully HE: Canadian Medical Association, Hamilton, Ontario, April 1999. Public versus private health care: Where do we draw the line?

Scully HE: Canadian Institute, Toronto, Ontario, April 1999. Reducing the risk of medical malpractice in a changing health care environment.

Scully HE: Royal College of Physicians and Surgeons of Canada, Ottawa, Ontario, March 1999. Health and public policy.

Scully HE: Canadian Medical Association, Ottawa, Ontario, January 1999. Physician resources in Canada beyond 2000: Feast or famine? What do we do about it?

Scully HE: Health Policy Forum/Parkhurst Publishing, Toronto, Ontario, October 1998. Directions for Canadian health care: A framework for sound decision.

Weisel RD: International Society for Minimally Invasive Cardiac Surgery, Paris, France, May 1999. Myocardial cell transplantation.

Weisel RD: Marquette Medical Alumni, Milwaukee, Wisconsin, May 1999. Heart cell transplantation.

Weisel RD: Analyst Day, Genzyme Corporation, Boston, Massachusetts, May 1999. Heart cell transplantation.

Weisel RD: International Society for Heart and Lung Transplantation, San Francisco, California, April 1999. Cell transplantation to restore cardiac function and rebuild the heart.

Weisel RD: Update on Cardiopulmonary Bypass, Breckenridge, Colorado, March 1999. Cardioplegia 1999: Past, present and future.

Weisel RD: Society of Thoracic Surgical Education Conference, Sedona, Arizona, February 1999. Cell transplantation.

Weisel RD: Pathophysiology and Techniques of Cardiopulmonary Bypass, San Diego, California, February 1999. (1) Myocardial protection: Past, present and future, (2) Cell therapy to repair broken hearts.

Weisel RD: Society of Thoracic Surgeons, San Antonio, Texas, January 1999. Cardiac restoration by cell transplantation.

Weisel RD: New Era Cardiac Care: Innovation and Technology, Scottsdale, Arizona, January 1999. Cardiac restoration by cell transplantation.

Weisel RD: Cardiac Surgery in the 90's, St. Thomas, Virgin Islands, November 1998. (1) Enhanced cardioplegia, (2) Feasibility of myocyte transplantation.

Weisel RD: Visiting Professor, Jefferson Medical School, Philadelphia, Pennsylvania, September 1998. Cardiomyocyte transplantation to restore function after a myocardial infarction.

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

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 (\$161,380 1996 - 1999).

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).

Cardioplegic additives. *Weisel RD:* Medical Research Council of Canada (\$67,907 1998 - 1999).

Cerebral protection by insulin for cardiac surgery. *Peniston CM, Weisel RD, Naylor CD, McLean RF:* Heart and Stroke Foundation (\$128,008 1997 - 1999).

Insulin cardioplegia for poor left ventricular function. *Yau TM, Weisel RD:* Heart and Stroke Foundation (\$69,600 1999).

New methods of myocardial protection. *Weisel RD:* Medical Research Council of Canada (\$8,573 1998 - 1999).

Protection from perioperative ischemia. *Weisel RD*: Heart and Stroke Foundation (\$52,855 1997 - 1999).

The safety and effects of O-raffinose crosslinked human hemoglobin in patients undergoing coronary artery bypass grafting. *Cheng DCH, Karski JM, Mazer D, Ralph-Edwards AC, Cusimano RJ, Yeo E*: Hemosol Incorporated (\$85,000 1998 - 1999).

DIVISION OF GENERAL SURGERY

Dr. R.A. Affifi - Lecturer
Dr. U. Ambus - Associate Professor
Dr. M.S. Cattral - Assistant Professor
Dr. L. Chaikof - Instructor
Dr. P.D. Greig - Professor
Dr. A.W. Hemming - Assistant 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

Abraham E, Marshall JC: Sepsis and mediator-directed therapy: Re-thinking the target populations. *Molecular Medicine Today* 1999 January; 5: pp 56-68.

Bohnen JMA, Marshall JC, Fry DE, Johnson SB, Solomkin JS: Clinical and scientific importance of source control in abdominal infections: Summary of a symposium. *Canadian Journal of Surgery* 1999 April: 42: pp 122-126.

Carroll JC, Heisey RE, Warner E, Goel V, McCready DR: Hereditary breast cancer: Psychosocial issues and family physicians' role. *Canadian Family Physician* 1999 January: 45: pp 126-132.

Catral MS, Hemming AW, Greig PD, Rowsell C, Cole E, Donat D, Wright E, Levy GA: Low incidence of rejection after synchronous pancreas kidney (SPK) with neoral. *Transplantation Proceedings* 1998 August: 30(5): pp 1946.

Catral MS, Hemming AW, Greig PD, Rowsell C, Cole E, Donat D, Wright E, Levy GA: Outcome of kidney transplant alone (KTA) versus synchronous pancreas kidney transplantation (SPK) in type I diabetics. *Transplantation Proceedings* 1998 August: 30(5): pp 1938-1939.

Catral MS, Hemming AW, Wanless IR, Al Ashgar H, Krajden M, Lilly L, Greig PD, Levy GA: Outcome of long-term ribavirin therapy for recurrent hepatitis C after liver transplantation. *Transplantation* 1999 May: 67(9): pp 1277-1280.

Ennis M, Pritchard KI, McCready DR, Koo J, Sidlofsky S, Trudeau M, Hood N, Redwood S: Adjuvant treatment and onset of menopause predict weight gain after breast cancer diagnosis. *Journal of Clinical Oncology* 1999 January: 17(1): pp 120-129.

Evans D, Marshall JC: Gastrointestinal dysfunction in the critically ill patient: Ileus and obstruction. In: *Oxford Textbook of Critical Care* (Webb AR, Shapiro MJ, Singer M, Suter P, eds). Oxford University Press, Oxford 1999: pp 347-350.

Fan J, Marshall JC, Jimenez M, Shek P, Zagorski JD, Rotstein OD: Alveolar macrophage priming for chemokine expression following hemorrhagic shock: Role in pulmonary inflammation. *Journal of Immunology* 1998 July: 161: pp 440-447.

Hackam DJ, Christou N, Khaliq Y, Duffy DR, Vaughan D, Marshall JC, Rotstein OD: Bioavailability of oral ciprofloxacin in early post-surgical patients. *Archives of Surgery* 1998 November: 133: pp 1221-1225.

Hackam DJ, Grinstein S, Rotstein OD: Lipopolysaccharide signalling pathways and their role in the development of the systemic inflammatory response syndrome. In: *Cytokines in Severe Sepsis and Septic Shock* (Redl H, Schlag G, eds). *Berkhauser Verlag, Basel* 1998: pp 37-56.

Hackam DJ, Rotstein OD, Sjolín C, Schreiber AD, Trimble WS, Grinstein S: V-Snare dependent secretion is required for phagocytosis. *Proceedings, National Academy of Science* 1998 September: 95: pp 11691-11699.

Hackam DJ, Rotstein OD, Zhang W-J, Gruenheld S, Gros P, Grinstein S: Host resistance to intracellular infection: Mutation of natural resistance-associated macrophage protein 1 (*Nramp1*) impairs phagosomal acidification. *Journal of Experimental Medicine* 1998 July: 188: pp 351-364.

Hanna WM, Kahn HJ, Chapman JAW, Fish EB, Lickley HLA, McCready DR: Pathologic characteristics of breast cancer that predict for local recurrence after lumpectomy alone. *Breast Journal* 1999 May: 5(2): pp 105-111.

Harmantas A, Tandan VR, Langer B, Scudamore CH, Chung SW: Selective versus total portosystemic shunts in the treatment of variceal hemorrhage in cirrhotic patients: Is there any advantage? *Hepatology Research* 1999 March: 14: pp 144-153.

Hebert PC, Wells G, Blajchman M, Marshall JC, Martin C, Pagliarello G, Tweeddale M, Schweitzer I, Canadian Critical Care Trials Group: A multicentre randomized controlled clinical trial of transfusion requirements in critical care. *New England Journal of Medicine* 1999 February: 340: pp 409-417.

Hebert PC, Wells G, Martin C, Tweeddale M, Marshall J, Blajchman M, Pagliarello G, Sandham D, Schweitzer I, Boisvert D, Calder L, Canadian Critical Care Trials Group: Variations in red cell transfusion practice in the intensive care unit: A multicentre cohort study. *Critical Care* 1999 March; 3: pp 57-63.

Heisey RE, Carroll JC, Warner E, McCready DR, Goel V: Hereditary breast cancer: Identifying and managing BRCA1 and BRCA2 carriers. *Canadian Family Physician* 1999 January; 45: pp 114-124.

Hemming AW, Cattral MS, Greig PD, Lilly LB, Ashby P, Levy GA: Domino liver transplantation for familial amyloid polyneuropathy: Optimal use of a scarce resource. *Transplantation Proceedings* 1999 May; 31: pp 515.

Hemming AW, Greig PD, Langer B: Current surgical management of hepatocellular carcinoma. *Advances in Surgery* 1999 January; 32: pp 169-192.

Hemming AW, Langer B, Greig PD, Taylor BR, Adams R, Heathcote J: Budd-Chiari syndrome: Shunt or transplant? *HPB International* 1998 November; 11(2): pp 136-139.

Heyland DK, Cook D, Heule M, Devitt H, Marshall J, Guslits B, Lang J, Jaeschke B, Canadian Critical Care Trials Group: The clinical utility of invasive diagnostic techniques in the setting of ventilator-associated pneumonia. *Chest* 1999 April; 115: pp 1076-1084.

Himal HS: Endoscopic retrograde cholangiopancreatography. In: *The Sages Manual: Fundamentals of Laparoscopy and G.I. Endoscopy* (Scott-Conner CEH, ed). Springer-Verlag, New York 1999: pp 485-495.

Himal HS: Role of endoscopic retrograde cholangiopancreatography in early acute biliary pancreatitis. *Surgical Endoscopy* 1999 January; 13: pp 541.

Liu MF, Ning Q, Pope M, Mosmann T, Liebowitz J, Ding JW, Fung LS, Rotstein O, Gorczyński R, Levy GA: Resistance of naive mice to murine hepatitis virus strain 3 requires development of A-TH1, but not A-TH2 response, whereas pre-existing antibody partially protects against primary infection. In: *Coronaviruses and Arteriviruses* (Enjuanes A, ed). Plenum Press, New York 1998: pp 415-423.

Marshall JC: Organ failure scoring. In: *Oxford Textbook of Critical Care* (Webb AR, Shapiro MJ, Singer M, Suter P, eds). Oxford University Press, Oxford 1999: pp 1078-1087.

Marshall JC: The gastrointestinal flora and its alterations in critical illness. *Current Opinion in Critical Care* 1999 April: 5: pp 119-125.

Marshall JC: Charting the course of critical illness: Prognostication and outcome description in the intensive care unit. *Critical Care Medicine* 1999 April: 27: pp 676-678.

Marshall JC: The effects of granulocyte colony-stimulating factor (G-CSF) in pre-clinical models of infection and acute inflammation. *Sepsis* 1998 December: 2: pp 213-220.

Marshall JC: An intensivist's dilemma: Support of the splanchnic circulation in critical illness. *Critical Care Medicine* 1998 October: 26: pp 1637-1638.

Marshall JC: The gut as a potential trigger of exercise-induced inflammatory responses. *Canadian Journal of Physiology and Pharmacology* 1998 September: 76: pp 479-484.

Marshall JC, Creery DM: Pre-clinical models of sepsis. *Sepsis* 1998 December: 2: pp 87-197.

Marshall JC, Foster DM, Walker PM, Romaschin AD: Endotoxemia in critical illness: Rapid detection and clinical relevance. In: *Sepsis and Organ Dysfunction: From Basics to Clinical Approach* (Baue AE, Berlot G, Gullo A, Vincent JL, eds). Springer-Verlag, New York 1999: pp 137-145.

McGilvray ID, Lu Z, Wei AC, Dackiw APB, Marshall JC, Kapus A, Levy G, Rotstein OD: Murine hepatitis virus strain 3 induces the macrophage prothrombinase *fgl-2* through p38 mitogen-activated protein kinase activation. *Journal of Biological Chemistry* 1998 November: 273: pp 32222-32227.

McGilvray ID, Rotstein OD: The role of coagulation in systemic inflammation: A review of the experimental evidence. *Sepsis* 1998 July: 2: pp 199-208.

McGilvray ID, Wei AC, Lu Z, Rotstein OD: MAP-kinase dependent induction of monocytic procoagulant activity by beta2-integrins. *Journal of Surgical Research* 1998 December: 80: pp 272-279.

Nathens AB, Marshall JC: Selective decontamination of the digestive tract in surgical patients: A systematic review of the evidence. *Archives of Surgery* 1999 February: 134: pp 170-176.

Nathens AB, Rotstein OD, Jones JJ, Dackiw APB, Gorczynski R: The glutathione depleting agent diethylmaleate prolongs renal allograft survival. *Journal of Surgical Research* 1998 July: 77: pp 75-79.

Parsons DA, Tracy SE, Handa KA, Greig PD: An update of the Canadian organ replacement register (1998). In: *Clinical Transplants 1998* (Cecka M, Terasaki A, eds). UCLA Tissue Typing Laboratory, Los Angeles 1999: pp 97-106.

Regehr G, MacRae H, Reznick RK, Szalay D: Comparing the psychometric properties of checklists and global rating scales for assessing performance on an OSCE-format examination. *Academic Medicine* 1998 September: 73: pp 993-997.

Reznick RK, Regehr G, Yee G, Rothman AI, Blackmore D, Dauphinee WD: Process-rating forms versus task-specific checklists in an OSCE for medical licensure. *Academic Medicine* 1998 October: 73(S): pp 97-99.

Rizoli SB, Kapus A, Fan J, Li YH, Marshall JC, Rotstein OD:

Immunomodulatory effects of hypertonic resuscitation on the development of lung inflammation following hemorrhagic shock. *Journal of Immunology* 1998 November: 161: pp 6288-6296.

Romaschin AD, Foster DM, Walker PM, Marshall JC:

Let the cells speak: Neutrophils as biologic markers of the inflammatory response. *Sepsis* 1998 October: 2: pp 119-125.

Romaschin AD, Harris DM, Ribeiro MB, Paice J, Foster DM, Walker PM, Marshall JC:

A rapid assay of endotoxin in whole blood using autologous neutrophil dependent chemiluminescence. *Journal of Immunological Methods* 1998 July: 212: pp 169-185.

Rotstein OD:

Antimicrobial agents for the prevention and treatment of abdominal infections: A new generation? *American Journal of Surgery* 1998 July: 176: pp S80-S83.

Rouzati AH, Taneja R, Marshall JC:

Apoptosis (programmed cell death) and the resolution of acute inflammation. In: *Sepsis and Organ Dysfunction: From Basics to Clinical Approach* (Baue AE, Berlot G, Gullo A, Vincent JL, eds). Springer-Verlag, New York 1999: pp 107-115.

Siminovic M, To T, Theriault M, Langer B:

Relation between hospital surgical volume and outcome for pancreatic resection for neoplasm in a publicly funded health care system. *Canadian Medical Association Journal* 1999 March: 160: pp 643-648.

Smeele LE, Irish JC, Gullane PJ, Neligan P, Brown DH, Rotstein LE:

A retrospective comparison of the morbidity and cost of different reconstructive strategies in oral and oropharyngeal carcinoma. *Laryngoscope* 1999 May: 109: pp 800-804.

Solomkin JS, Dellinger EP, Bohnen JM, Rotstein OD:

The role of oral antimicrobials for the management of intra-abdominal infections. *New Horizons* 1998 July: 6: pp S46-S52.

Stewart AK, Lassam NJ, Quirt IC, Bailey DJ, Rotstein LE, Krajden M, Dessureault S, Gallinger S, Cappe D, Wan Y, Addison CL, Moen RC, Gauldie J, Graham FL: Adenovector-mediated gene delivery of interleukin-2 in metastatic breast cancer and melanoma: Results of a phase one clinical trial. *Gene Therapy* 1999 April; 6: pp 350-363.

Taylor B: Carcinoma of the pancreas versus chronic pancreatitis: A dilemma with significant consequences. *World Journal of Surgery* 1999 January; 120: pp 10-17.

Warner E, Heisey RE, Goel V, Carroll JC, McCreedy DR: Hereditary breast cancer: Risk assessment of patients with a family history of breast cancer. *Canadian Family Physician* 1999 January; 45: pp 104-112.

Watson RWG, Rotstein OD, Parodo J, Bitar R, Marshall JC: The interleukin-1B converting enzyme (caspase-1) inhibits apoptosis of inflammatory neutrophils through activation of IL-1B. *Journal of Immunology* 1998 July; 161: pp 957-962.

Wright JR, Whelan TJ, McCreedy DR, O'Malley FP, Provincial Breast Cancer Disease Site Group: Management of ductal carcinoma in situ of the breast. *Cancer Prevention and Control* 1998 December; 2(6): pp 312-319.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Cattral MS: Kidney Foundation of Canada, Ottawa, Ontario, April 1999. Kidney pancreas transplantation.

Cattral MS: Canadian Fellows Workshop, Lake Louise, Alberta, March 1999. Pancreas transplantation update.

Cattral MS: McMaster University, Hamilton, Ontario, February 1999. Kidney pancreas transplantation.

Cattral MS: International Conference on Tolerance Induction, Breckenridge, Colorado, January 1999. Induction of tolerance with dendritic cells.

Catral MS: Ontario Provincial Symposium, Rexdale, Ontario, November 1998. Partnerships towards better living.

Catral MS: Royal College of Physicians and Surgeons of Canada, Toronto, Ontario, September 1998. Advances in pancreas transplantation.

Greig PD: Canadian Liver Transplant Study Group, Lake Louise, Alberta, March 1999. Effect of medical status on survival following liver transplantation in Canada.

Greig PD: Canadian Transplant Management Advisory Forum, Catalina, Arizona, November 1998. Steroid withdrawal.

Hemming AW: American College of Surgeons, Orlando, Florida, October 1998. Early management of necrotizing pancreatitis.

Himal HS: Society of American Gastrointestinal Endoscopic Surgeons, Cincinnati, Ohio, August 1998. (1) Endoscopic therapy of upper G.I. hemorrhage, (2) Workshop: Endoscopy, (3) Workshop: Laparoscopic surgery, (4) Therapeutic colonoscopy, (5) Laparoscopic surgery.

Langer B: Society of Obstetricians and Gynaecologists of Canada, Ottawa, Ontario, June 1999. Pancreatic cancer surgery: A pilot project in the regionalization of cancer care.

Langer B: Maimonides Medical Center, New York, New York, May 1999. Progress in the management of hepatocellular carcinoma.

Langer B: American College of Surgeons, Orlando, Florida, October 1998. Panel: Ethical issues in access to care.

Langer B: Northwestern University, Chicago, Illinois, October 1998. Modern management of hepatocellular carcinoma.

Marshall JC: International Shock Congress, Philadelphia, Pennsylvania, June 1999. Are SIRS and MODS important entities in the clinical evaluation of patients?

Marshall JC: International Symposium of Intensive Care Medicine, Istanbul, Turkey, May 1999. The gut in critical illness.

Marshall JC: Surgical Infection Society, Seattle, Washington, May 1999. Outcome measures for clinical trials in sepsis.

Marshall JC: International Congress of Intensive Care and Emergency Medicine, Brussels, Belgium, March 1999. (1) Report of the Roundtable Conference on the Immune Response in the Critically Ill, (2) Neutrophils as dynamic markers of systemic inflammation, (3) Surgical management of severe acute pancreatitis, (4) Ongoing challenges of clinical trials in sepsis, (5) Is there a surgeon in the ICU?

Marshall JC: Roundtable Conference on the Immune Response in the Critically Ill, Brussels, Belgium, March 1999. Apoptosis and the immune abnormalities of critical illness.

Marshall JC: Critical Care Advisory, Key West, Florida, March 1999. Do transfusions kill?

Marshall JC: Society of Critical Care Medicine, San Francisco, California, January 1999. (1) Tertiary peritonitis, (2) Lessons from sepsis trials: Putting our knowledge to use: Initiatives of the international sepsis forum, (3) Stress ulcer prophylaxis: Current status, (4) Strategies to prevent MODS/MOF in acute lung injury, (5) We should revise the 1992 definition of sepsis consensus statement, (6) Roundtable: The challenge for clinical trials.

Marshall JC: Vancouver Health Sciences Centre, Vancouver, British Columbia, December 1998. (1) Advances in the management of acute pancreatitis, (2) Why do sepsis trials fail?

Marshall JC: APICE/Organ Failure Academy, Trieste, Italy, November 1998. (1) Neutrophil apoptosis and the resolution of systemic inflammation, (2) Does the MOD score help the doctor, the patient, or both?, (3) Rapid assay of endotoxin in the ICU.

Marshall JC: International Congress on Intensive and Critical Care Medicine, Guayaquil, Ecuador, November 1998. (1) Colloids or crystalloids: Which is better?, (2) Endotoxemia in the critically ill patient, (3) Sepsis and SIRS: New insights, (4) Current prospects of endotoxin-directed therapies, (5) Why have sepsis trials failed?

Marshall JC: Toronto Critical Care Medicine Symposium, Toronto, Ontario, October 1998. (1) Introductory address workshop: Creating a culture of clinical research, (2) Re-thinking the entry criteria for sepsis trials, (3) Can we stage systemic inflammation?

Marshall JC: American College of Surgeons, Orlando, Florida, October 1998. (1) Chair: Infection in the ICU, (2) Antibiotics in acute pancreatitis: The case against.

Marshall JC: Visiting Professor, McMaster University, Hamilton, Ontario, October 1998. From concepts to syndromes to diseases: The challenges of sepsis research.

McCready DR: Community Medical Oncologists of Metropolitan Toronto, Gravenhurst, Ontario, June 1999. Sentinel node mapping in breast cancer and melanoma.

McCready DR: Ottawa Regional Cancer Centre, Ottawa, Ontario, February 1999. Reducing surgical morbidity in early breast cancer: The role of the sentinel lymph node.

McCready DR: Visiting Professor, University of Melbourne, Melbourne, Australia, February 1999. (1) Axillary dissection and the evolving role of sentinel node biopsy, (2) DCIS: Surgical controversies, (3) Imaging for sentinel node biopsy, (4) Management and follow-up of breast cancer and other high risk patients, (5) Management of small breast cancer, (6) Multidisciplinary care of the woman with early stage breast care, including the role of the breast care nurse, (7) Sentinel node biopsy: Tips and techniques.

McCready DR: Royal College of Physicians and Surgeons of Canada, Toronto, Ontario, September 1998. Surgical management of duct carcinoma in-situ.

Reznick RK: Institute for Medical Education, Berne, Switzerland, June 1999. Performance-based assessment and medical licensure.

Reznick RK: University of California at San Francisco, San Francisco, California, March 1999. Assessing technical skills: A low-tech solution.

Reznick RK: Surgeons as Educators Course, American College of Surgeons, Atlanta, Georgia, November 1998. Sessions on measurement, testing and medical student/resident failure.

Reznick RK: American College of Surgeons, Orlando, Florida, October 1998. (1) Life after residency: Acquiring, documenting and defending new surgical skills, (2) The clinical competence of medical students: Can we measure it objectively?

Reznick RK: Fred MacLeod Lecturer, Canadian Association of Pediatric Surgeons, Toronto, Ontario, September 1998. Skills commensurate with level of training.

Reznick RK: University of California at Los Angeles, Los Angeles, California, September 1998. Evaluation of faculty and residents.

Reznick RK: Surgeons as Educators Course, Royal Australasian College of Surgeons, Melbourne, Australia, July 1998. Sessions on measurement, testing and medical student/resident failure.

Rotstein LE: American Head and Neck Society, Palm Desert, California, April 1999. (1) Parathyroid localization: Pre-operative sestamibi scanning versus intra-operative nuclear mapping versus four gland exploration, (2) Panel: Management of the neck.

Rotstein LE: Royal College of Physicians and Surgeons of Canada, Toronto, Ontario, September 1998. FNA in head and neck masses: The need(le) for clinical/pathology interaction.

Rotstein OD: J. Englebert Dunphy Lecture, University of California at San Francisco, San Francisco, California, February 1999. Immunomodulation by altering cell volume: Implications for organ injury.

Taylor BR: Ontario Association of General Surgeons, Hamilton, Ontario, November 1998. General surgeons versus the media: Anatomy of a confrontation: A farce in three acts.

Taylor BR: Visiting Professor, University of Western Ontario, London, Ontario, November 1998. The training of the surgeon: Year 2000 and beyond.

Taylor BR: Southwestern Ontario Surgical Society, London, Ontario, November 1998. The ten best reasons why I'm a better person for having knocked heads against the purple and white.

Taylor BR: Canadian Association of General Surgeons, Toronto, Ontario, September 1998. (1) Training and credentialling for new procedures in general surgery: The University Department's approach, (2) Panelist: Unexpected findings at surgery, (3) Biliary tract disease in the frail elderly.

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 comprehensive examination for senior surgical residents: PAME/OSATS. *MacRae HM, Regehr G, Reznick RK:* Physicians Services Incorporated Foundation (\$25,500 1997 - 1998).

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 prospective cohort study of the prognostic effect of body size and related factors in local regional breast cancer. *Goodwin PJ, Pritchard KI, McCready DR, Sidlofsky S, Koo J, Toner B, Page P*: National Cancer Institute of Canada (\$209,165 1995 - 1998).

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, McCready DR, Trudeau ME*: Ministry of Health (\$66,324 1997 - 1999).

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, Catral MS, Greig PD*: Roche/Syntex (\$1,200,000 1997 - 1999).

Antioxidant therapy for the management and prevention of adult respiratory distress syndrome in rodent and pig models of acute lung injury. *Rotstein OD*: Defence and Civil Institute of Environmental Medicine (\$385,000 1996 - 1998).

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).

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).

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).

Investigation of the chronic effects of insulin delivered portally versus peripherally on lipid and carbohydrate metabolism studies in pancreas transplant recipients. *Lewis GF, Cattral MS*: Juvenile Diabetes Foundation International (\$120,000 1997 - 1998).

MAK 195 F monoclonal antibody to tumor necrosis factor in the treatment of the hyperinflammatory response syndrome. *Marshall JC*: Knoll Pharmaceutical Limited (\$140,000 1995 - 1999).

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).

Osteoclast activity in inflammatory arthritis. *Heersche JNM, Rotstein OD, Grinstein S, Bogoch E*: Arthritis Society (\$180,000 1996 - 1999).

Pesticides and polychlorinated biphenyls: Associations with breast cancer through genetic polymorphisms. *McCready DR, Narod SA, Aronson KJ*: Canadian Breast Cancer Foundation (\$35,000 1997 - 1998).

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).

Randomized, double-blind, comparative study of the efficacy and safety of intravenous and oral mycophenolate mofetil and azathioprine, each in combination with cyclosporin and corticosteroids in liver transplant recipients. *Levy GA*, Greig PD, Cattral MS, Hemming AW, Lilly LB: Hoffmann-LaRoche Limited (\$1,200,000 1997 - 1998).

Regulation of neutrophil programmed cell death (apoptosis) in clinical and experimental inflammation. *Marshall JC*: Medical Research Council of Canada (\$270,000 1999 - 2002).

Studies of tolerance induction in renal allograft recipients. *Cattral MS*: Physicians Services Incorporated Foundation (\$95,000 1997 - 1999).

Teaching technical skills in oral surgery: Evaluating the utility of basis dexterity training. *Caminiti M*, Reznick RK, Regehr G, Hamstra S, Brown M: Association of Canadian Medical Colleges (\$19,437 1999 - 2000).

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, 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 Canadian sepsis registry: A pilot project. *Marshall JC*, Christou NV: Bayer Canada Limited (\$10,000 1997 - 1998).

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).

HONOURS RECEIVED

Greig PD: Outstanding Lecturer, Principles of Surgery Series, Department of Surgery, University of Toronto, May 1999.

Langer B: Elected First Vice-President, American Surgical Association, April 1999.

Marshall JC: Lister Prize, Department of Surgery, University of Toronto, May 1999.

Reznick RK: Distinguished Contribution to Medical Education Award, Canadian Association of Medical Education, February 1999.

Rotstein OD: Anderson Award for Excellence in Education Administration, University of Toronto, July 1998.

DIVISION OF NEUROSURGERY

Dr. M.A. 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 — Associate Professor

Dr. C.H. Tator - Professor

Dr. M. Tymianski - Assistant Professor

Dr. M.C. Wallace - Associate Professor

PUBLICATIONS

Agrawal S, Theriault E, Fehlings MG: Role of group I metabotropic glutamate receptors in the pathophysiology of spinal cord injury. *Journal of Neurotrauma* 1998 November; 15: pp 929-941.

Al-Yamany M, Al-Shayji A, Bernstein M: Isolated oculomotor nerve palsy: An unusual presentation of glioblastoma multiforme: Case report and review of the literature. *Journal of Neuro-Oncology* 1999 April: 41: pp 77-80.

Al-Yamany M, Deck J, Bernstein M: Pseudo-subarachnoid hemorrhage: A rare neuroimaging pitfall. *Canadian Journal of Neurological Sciences* 1999 February: 26: pp 57-59.

Angelov L, Davis A, O'Sullivan B, Bell R, Guha A: Management of neurogenic sarcomas: University of Toronto experience. *Neurosurgery* 1998 July: 43: pp 56-65.

Angelov L, Guha A: Peripheral nerve tumors: Essentials of neuro-oncology. In: *Essentials of Neuro-Oncology* (Bernstein M, Berger M, eds). Thieme Publications, New York 1998: pp 103-116.

Ashby P, Reynolds C, Wennberg R, Lozano AM, Rothwell J: On the focal nature of inhibition and facilitation in the human motor cortex. *Clinical Neurophysiology* 1999 March: 110(3): pp 550-555.

Bampoe J, Barton J, Bernstein M: Reversal of rapid visual loss in a patient with an imaging-stable diffuse glioma following frontal lobectomy. *Journal of Clinical Neurosciences* 1999 February: 6: pp 68-70.

Bampoe J, Bauman G, Cairncross G, Bernstein M: Adult low grade gliomas: Natural history, prognostic factors, and timing of treatment. 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 135-148.

Bampoe J, Bernstein M: The role of surgery in low grade glioma. *Journal of Neuro-Oncology* 1999 May: 42: pp 259-269.

Bampoe J, Salhia B, Micallef J, Glen J, Bernstein M: Elective neurosurgical office consultations: How well are patients informed? *Canadian Journal of Public Health* 1998 August: 89: pp 280-283.

Bernstein M: Low grade glioma guidelines and outcomes committee of the American Association of Neurological Surgeons: Practice parameters in adults with suspected or known supratentorial non-optic pathway glioma. *Neurosurgical Focus* 1998 September: 4: pp 10.

Bracken MB, Shepard MJ, Holford TR, Leo-Summers L, Aldrich EF, Fazl M, Fehlings MG, Herr DL, Hitchon PW, Nockels RP, Pascale V, Perot PL, Piepmeier J, Sonntag V, Wagner F, Wilberger J, Winn HR, Young W: Methylprednisolone for 24 or 48 hours or tirilizad mesylate for 48 hours after acute spinal cord injury: One year follow-up: Results of the third national acute spinal cord injury randomized controlled trial. *Journal of Neurosurgery* 1998 November: 89: pp 699-706.

Davis KD, Lozano AM, Manduch M, Tasker RR, Kiss ZH, Dostrovsky JO: Thalamic relay site for cold perception in humans. *Journal of Neurophysiology* 1999 April: 81(4): pp 1970-1973.

Fehlings MG, Rao S, Tator C, Skaf G, Arnold P, Benzel E, Dickman C, Cuddy B, Green B, Hitchon P, Northrup B, Sonntag V, Wagner F, Wilberger J: The optimal radiological method to assess spinal canal compromise and cord compression in patients with cervical spinal cord injury: Part II: Results of a multicentre study. *Spine* 1999 March: 24: pp 605-613.

Fehlings MG, Skaf G: A review of the pathophysiology of cervical spondylotic myelopathy with insights for potential novel mechanisms drawn from traumatic spinal cord injury. *Spine* 1998 December: 23: pp 2730-2737.

Fehlings MG, Tator CH: An evidence-based review of surgical decompression for acute spinal cord injury: Rationale, indications, and timing based on experimental and clinical studies. *Neurosurgical Focus* 1999 January: 6: pp 113-120.

Feldkamp M, Angelov L, Guha A: Neurofibromatosis type I peripheral nerve tumors: Aberrant activation of the ras pathway. *Surgical Neurology* 1999 April: 51: pp 211-218.

Feldkamp M, Gutmann D, Guha A: Neurofibromatosis type-1: Piecing the puzzle together. *Canadian Journal of Neurological Sciences* 1998 August: 25(3): pp 181-191.

Feldkamp M, Lau N, Rak J, Kerbel R, Guha A: Astrocytoma cell lines express high levels of vascular endothelial growth factor (VEGF) which is reduced by inhibition of the ras signalling pathway. *International Journal of Cancer* 1999 April: 81: pp 118-124.

Francis J, Zhang X, Ho W, Wallace MC, Zhang L, Eubanks JH: Decreased hippocampal expression, but not functionality, of GABA-B receptors after transient cerebral ischemia in rats. *Journal of Neurochemistry* 1999 January: 72(1): pp 1-8.

Galvez-Jimenez N, Lozano A, Tasker R, Duff J, Hutchison W, Lang AE: Pallidal stimulation in Parkinson's disease patients with a prior unilateral pallidotomy. *Canadian Journal of Neurological Sciences* 1998 November: 25(4): pp 300-305.

Giddens JL, Radomski SB, Hirshberg ED, Hassouna M, Fehlings MG: Urodynamic findings in adults with the tethered cord syndrome. *Journal of Urology* 1999 April: 161: pp 1249-1254.

Gross RE, Lombardi WJ, Duff J, Lang AE, Hutchison WD, Saint-Cyr JA, Tasker RR, Lozano AM: Relationship of lesion location to clinical outcome following microelectrode-guided pallidotomy for Parkinson's disease. *Brain* 1999 March: 122(3): pp 405-416.

Gross RE, Lombardi WJ, Tasker RR, Saint-Cyr JA, Dostrovsky JO, Lang AE, Lozano AM: Variability in lesion location after microelectrode-guided pallidotomy for Parkinson's disease: Anatomical, physiological and technical factors that determine lesion distribution. *Journal of Neurosurgery* 1999 March: 90(3): pp 468-477.

Guha A: The Royal College medal in surgery lecture, 1997: The role of ras activation in human nervous system tumors. *Canadian Journal of Neurological Sciences* 1998 November: 89: pp 267-281.

Houlden DA, Schwartz ML, Tator CH, Asbhy P, MacKay WA: Spinal cord-evoked potentials and muscle responses evoked by transcranial magnetic stimulation in ten awake human subjects. *Journal of Neuroscience* 1999 March; 19: pp 1855-1862.

Hsu JC, Zhang Y, Takagi N, Gurd JW, Wallace MC, Zhang L, Eubanks JH: Decreased expression and functionality of NMDA receptor complexes persist in the CA1, but not in the dentate gyrus, after transient cerebral ischemia. *Journal of Cerebral Blood Flow and Metabolism* 1998 July; 18: pp 768-775.

Hutchison WD, Allan RJ, Opitz J, Levy R, Dostrovsky JO, Lozano AM: Neurophysiologic identification of the subthalamic nucleus in surgery for Parkinson's disease. *Annals of Neurology* 1998 July; 44: pp 622-628.

Hutchison WD, Davis KD, Lozano AM, Tasker RR, Dostrovsky JO: Pain-related neurons in the human cingulate cortex. *Nature Neuroscience* 1999 May; 2(5): pp 403-405.

Imamura H, Tator CH: Effect of intrathecal nimodipine on spinal cord blood flow and evoked potentials in the normal or injured cord. *Spinal Cord* 1998 September; pp 497-506.

Krassiokov A, Fehlings MG: Changes in cardiovascular neurons in the rostroventrolateral medulla after spinal cord injury. *Neuroscience* 1999 January; 88: pp 959-973.

Kulkarni A, Guha A, Lozano A, Bernstein M: The incidence of silent hemorrhage and delayed deterioration after stereotactic brain biopsy. *Journal of Neurosurgery* 1998 July; 89: pp 31-35.

Kumar R, Lozano AM, Kim YJ, Hutchison WD, Sime E, Halket E, Lang AE: Double-blind evaluation of the effects of subthalamic nucleus deep brain stimulation in advanced Parkinson's disease. *Neurology* 1998 October; 51(3): pp 850-855.

Lang AE, Lozano AM: Parkinson's disease: Medical progress part I. *New England Journal of Medicine* 1998 October; 339: pp 1044-1053.

Lang AE, Lozano AM: Parkinson's disease: Medical progress part II. *New England Journal of Medicine* 1998 October: 339: pp 1130-1143.

Lang AE, Montgomery E, Duff J, Tasker RR, Hutchison WD, Lozano AM: Results of unilateral pallidotomy for Parkinson's disease: Two year experience and review of the literature. In: *Pallidotomy for the Treatment of Parkinson's Disease and Other Movement Disorders* (Krauss JK, Grossman RG, Jankovic J, eds). Lippincott-Raven Publishers, Philadelphia 1998: pp 153-172.

Laperriere NJ, Leung PMK, McKenzie S, Milosevic M, Wong S, Glen J, Pintilie M, Bernstein M: Randomized study of brachytherapy in the initial management of patients with malignant astrocytoma. *International Journal of Radiation Oncology, Biology and Physics* 1998 August: 41: pp 1005-1011.

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Lozano AM, Bachoo R, Vanderlinden G, Rothbart P: Microsurgical C2 ganglionectomy for chronic intractable occipital pain. *Journal of Neurosurgery* 1998 July: 89(3): pp 359-365.

Lozano AM, Lang AE: Clinical assessment and study design for pallidotomy. In: *Pallidotomy for the Treatment of Parkinson's Disease and Other Movement Disorders* (Krauss JK, Grossman RG, Jankovic J, eds). Lippincott-Raven Publishers, Philadelphia 1998: pp 101-112.

Lozano AM, Lang AE: Pallidotomy: Indications and techniques. *American Academy of Neurological Surgery* 1998 July: 10: pp 131-142.

Lozano AM, Lang AE, Hutchison WD: Pallidotomy for tremor. *Neurology* 1998 July: 13(3): pp 107-110.

Lozano AM, Lang AE, Hutchison WD, Dostrovsky JO: New developments in understanding the etiology of Parkinson's disease and its treatment. *Current Opinion in Neurobiology* 1998 December: 8(6): pp 783-790.

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Manninen PH, Burke SJ, Wennberg R, Lozano AM, Beheiry HE: Intra-operative localization of an epileptogenic focus with alfentanil and fentanyl. *Anesthesia and Analgesia* 1999 May: 88(5): pp 1101-1106.

Namiki J, Tator CH: Cell proliferation and nestin expression in the ependyma of the adult rat spinal cord after injury. *Journal of Neuropathology and Experimental Neurology* 1999 January: pp 489-498.

Ng WP, Fehlings MG, Cuddy B, Dickman C, Fazl M, Green B, Hitchon P, Northrup B, Sonntag V, Wagner W, Tator CH: Surgical treatment for acute spinal cord injury study (STASCIS) pilot study #2: Evaluation of protocol for decompression within eight hours of injury. *Neurosurgical Focus* 1999 January: 6: pp 17-25.

Pahapill P, Lozano AM: Deep brain stimulation for Parkinson's disease. *Mature Medicine* 1998 November: 1(6): pp 10-14.

Park YK, Tator CH: Failure of topical DMSO to improve blood flow or evoked potentials in rat spinal cord injury. *Journal of Korean Medical Science* 1998 December: 13: pp 638-644.

Radhakrishnan V, Tsoukatos J, Davis KD, Tasker RR, Lozano AM, Dostrovsky JO: A comparison of the burst activity of lateral thalamic neurons in chronic pain and non-pain patients. *Pain* 1999 March: 80(3): pp 567-575.

Rao S, Fehlings MG: The optimal radiological method to assess spinal canal compromise and cord compression in patients with cervical spinal cord injury: Part I: An evidence-based analysis of the published literature. *Spine* 1999 March: 24: pp 598-604.

Rezai AR, Lozano AM, Crawley AP, Joy MLG, Davis KD, Kwah CL, Dostrovsky JO, Tasker RR, Mikulis DJ: Thalamic stimulation and functional magnetic resonance imaging: Localization of cortical and subcortical activation with implanted electrodes: Technical note. *Journal of Neurosurgery* 1999 March: 90(3): pp 583-590.

Ross IB, Tator CH: Stereotactic radiosurgery for acoustic neuroma: A Canadian perspective. *Canadian Journal of Neurological Sciences* 1998 November: 25: pp 310-314.

Schumacher A, Eubanks J, Fehlings MG: Increased calpain-1 mediated proteolysis and preferential degradation of dephosphorylated NF200 following traumatic spinal cord injury. *Neuroscience* 1999 April: 91(2): pp 733-743.

Siddiqi S, Fehlings MG: Ventral and ventrolateral approaches to the spine. In: *Spine Surgery: Techniques, Complication Avoidance and Management* (Benzel E, ed). Churchill Livingstone, New York 1998: pp 267-284.

Stiver SI, Porter PJ, Willinsky RA, Wallace MC: Acute human histopathological and study of an intracranial saccular aneurysm treated by Guglielmi detachable coils: Case report and review of pathological studies of the endovascular treatment of aneurysm. *Journal of Neurosurgery* 1998 November: 43(5): pp 1203-1208.

Tator CH: The stimulus for an acute spinal cord injury unit. *Canadian Journal of Neurological Sciences* 1999 January: 26: pp 236-241.

Tator CH, Carson JD, Edmonds VE: Spinal and head injuries in ice hockey: A three decade perspective. In: *Safety in Ice Hockey* (Ashare AB, ed). American Society for Testing and Materials, New York 1998: pp 1341.

Tator CH, Fehlings MG: Review of clinical trials of neuroprotection in acute spinal cord injury. *Neurosurgical Focus* 1999 January: 6: pp 44-56.

Tator CH, Fehlings MG, Thorpe K, Taylor MA: Current use and timing of spinal surgery for management of acute spinal cord injury in North America: Results of a retrospective multicentre study. *Neurosurgical Focus* 1999 January; 6: pp 121-127.

Taylor MD, Bernstein M: Awake craniotomy with brain mapping as the routine surgical approach to treating patients with supratentorial intra-axial tumors: A prospective trial of 200 cases. *Journal of Neurosurgery* 1999 January; 90: pp 35-41.

Trepanier L, Saint-Cyr J, Lozano A, Lang AE: Neuropsychological consequences of posteroventral pallidotomy for the treatment of Parkinson's disease. *Neurology* 1998 August; 51: pp 207-215.

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Warnock G, Tator CH: Surgical research in Canada: Synopsis of a consensus conference. *Canadian Journal of Surgery* 1998 August; 4: pp 289-298.

Wennberg R, Gross D, Quesney F, Gross R, Oliver A, Lozano A: Transient epileptic foci associated with intracranial hemorrhage in patients with subdural and epidural electrode placement. *Clinical Neurophysiology* 1999 March; 110(3): pp 550-555.

Wennberg R, Quesney LF, Lozano A, Olivier A, Rasmussen T: Role of electrocorticography in surgery for lesion-related frontal lobe epilepsy. *Canadian Journal of Neurological Sciences* 1999 February; 26(1): pp 33-39.

Wilberger JE, Sarkarati M, Benzel EC, Tator CH: Medical management of adult and pediatric spinal cord injury. In: *Spine Surgery: Techniques, Complication Avoidance and Management* (Benzel E, ed). Churchill Livingstone, New York 1998: pp 1347-1351.

Zeidman S, Fehlings MG: Cauda equina syndrome. In: *Spine Surgery: Techniques, Complication Avoidance and Management* (Benzel E, ed). Churchill Livingstone, New York 1998: pp 651-661.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Bernstein M: Banff Conference, Banff, Alberta, January 1999. Intra-operative MRI: Working in the magnet.

Bernstein M: Congress of Neurological Surgeons, Seattle, Washington, October 1998. (1) Image-guided surgery for brain tumors, (2) Low grade gliomas.

Fehlings MG: Visiting Professor, American University of Beirut, Beirut, Lebanon, June 1999. (1) Anterior cervical reconstruction, (2) Classification and management of thoracolumbar fractures, (3) Pathophysiology and treatment of spinal cord injury, (4) Role of surgery in spinal cord injury.

Fehlings MG: Canadian Congress of Neurological Sciences, Edmonton, Alberta, June 1999. Image-guided spine surgery.

Fehlings MG: Joint Section on Disorders of the Spine and Peripheral Nerves, Orlando, Florida, February 1999. Theatre in the round: Anterior cervical plate fixation.

Fehlings MG: Visiting Professor, Loyola University Medical Center, Chicago, Illinois, January 1999. (1) Reconstruction of the craniocervical junction, (2) Course: Craniocervical fixation techniques.

Fehlings MG: Royal College of Physicians and Surgeons of Canada Visiting Professor, Dalhousie Medical School, Halifax, Nova Scotia, December 1998. (1) Reconstruction of the craniocervical junction, (2) Pathophysiology and treatment of spinal cord injury: From bench to bedside.

Fehlings MG: Congress of Neurological Surgeons, Seattle, Washington, October 1998. (1) Workshop: Anterior cervical plating, (2) Seminar leader: Cervical instrumentation approaches, (3) Workshop: Neurophysiological changes after acute and chronic spinal cord injury, (4) Neuroprotective approaches for acute spinal cord injury, (5) Role of surgery in spinal cord injury, (6) Role of surgery in the management of acute spinal cord injury, (7) Posterior instrumentation techniques for the subaxial cervical spine.

Fehlings MG: Visiting Professor, Wilford Hall Medical Center, San Antonio, Texas, September 1998. (1) Management strategies for C1-C2 pathology, (2) Pathophysiology of spinal cord injury: Update on clinical and basic research.

Guha A: Visiting Professor, University of Buffalo, Buffalo, New York, April 1999. Management of peripheral nerve tumors.

Guha A: Visiting Professor, University of Wisconsin, Madison, Wisconsin, April 1999. Comprehensive cancer care clinic.

Guha A: National Neuroscience Centre, Calcutta, India, December 1998. (1) Management of peripheral nerve injuries, (2) Management of peripheral nerve tumors, (3) Molecular biology of astrocytomas, (4) Dissection of brachial plexus.

Lozano AM: Stereotactic, Functional and Restorative Neurosurgery: Advances and Prospects for the New Millennium, New York, New York, June 1999. (1) Intra-operative sub-cortical mapping, (2) Surgery for Parkinson's disease: Globus pallidus and thalamus; lesioning versus stimulation.

Lozano AM: Basal Ganglia Symposium, Sarasota, Florida, May 1999. Deep brain stimulation.

Lozano AM: International Brain Research Organization Symposium on Pain/Neuroimmune System and Workshop on Pain Management, Beirut, Lebanon, May 1999. Treating pain by electrically stimulating the brain.

Lozano AM: American Association of Neurological Surgeons, New Orleans, Louisiana, April 1999. (1) Deep brain stimulation for movement disorders, (2) Subthalamic nucleus stimulation for Parkinson's disease, (3) Brain stimulation: Future prospects.

Lozano AM: American Academy of Neurology, Toronto, Ontario, April 1999. (1) The current status of pallidotomy, (2) Movement disorder surgery.

Lozano AM: Keynote Address, Anniversary of Neurosurgery in Egypt: Deep Brain Stimulation for Movement Disorders, Cairo, Egypt, March 1999. (1) Deep brain stimulation for movement disorders, (2) Movement disorders surgery: State of the art, (3) Functional neurosurgery: State of the art and projections into the new millennium.

Lozano AM: Glutaric Aciduria Symposium, Strasburg, Pennsylvania, February 1999. Surgery for dystonia.

Lozano AM: Canadian Movement Disorder Group, Orangeville, Ontario, January 1999. Movement disorder surgery.

Lozano AM: Visiting Professor, University of Vienna, Vienna, Austria, November 1998. Surgery for dystonia.

Lozano AM: Dyskinesia Symposium, Hamilton, Bermuda, November 1998. Pathophysiology of dyskinesias.

Lozano AM: University of Buffalo, Buffalo, New York, November 1998. Novel surgical treatments for Parkinson's disease.

Lozano AM: Keynote Speaker, Parkinson's Foundation of Canada, Quebec City, Quebec, October 1998. Surgery for Parkinson's disease.

Lozano AM: International Basal Ganglia Society, Brewster, Massachusetts, October 1998. The direct and indirect pathways in the basal ganglia.

Lozano AM: International Movement Disorder Society, New York, New York, October 1998. Novel challenges and treatments for dystonia.

Lozano AM: Congress of Neurological Surgeons, Seattle, Washington, October 1998. Deep brain stimulation for Parkinson's disease.

Lozano AM: Cleveland Clinic Foundation, Cleveland, Ohio, September 1998. Surgery for Parkinson's disease.

Lozano AM: International Neuromodulation Society, Luzerne, Switzerland, September 1998. (1) Pathophysiology of movement disorders, (2) Thalamic stimulation for epilepsy.

Lozano AM: Brain Stimulation for Epilepsy, Minneapolis, Minnesota, August 1998. Thalamic stimulation for epilepsy.

Lozano AM: World Federation of Neurology, Monte Carlo, Monaco, August 1998. Deep brain stimulation for Parkinson's disease.

Tator CH: Acquired Brain Injury Network, Toronto, Ontario, June 1999. Concussions in hockey players.

Tator CH: Inter-Urban Spinal Cord Injury Conference, Ottawa, Ontario, May 1999. Neural recovery and regeneration after spinal cord injury.

Tator CH: Neural Behavioral Rehabilitation in Acquired Brain Injury, Hamilton, Ontario, May 1999. Long-term management of athletic brain injury.

Tator CH: International Symposium on Neurotraumatology, Infection and Critical Care Symposium, Sao Paulo, Brazil, April 1999. (1) Classification of spinal cord injury based on neurological presentation: Neurotrauma spinal cord injury, (2) Management of the locked facet syndrome, (3) Spinal cord syndrome with physiological and anatomic correlations.

Tator CH: American Association of Neurological Surgeons, New Orleans, Louisiana, April 1999. (1) Calcium influx is required to initiate regrowth after neurite transection, (2) Neuronal death after neurite transection is independent of calcium influx.

Tator CH: Wayne State University, Detroit, Michigan, November 1998. Acute management of athletic head injury.

Tator CH: W.B. and M.H. Chung Lecture, University of British Columbia, Vancouver, British Columbia, November 1998. (1) Breadth of surgery research in the 1990 s, (2) Clinical trials in spinal surgery.

Tator CH: French Institute on Spinal Cord Research, Deauville, France, October 1998. (1) Anatomical assessment of acute spinal cord injury in the acute, subacute and chronic stages, (2) Results of clinical trials of neuroprotection for acute spinal cord injury.

Wallace MC: Royal College of Physicians and Surgeons of Canada/ Canadian Association of Emergency Physicians, Toronto, Ontario, September 1998. Endarterectomy.

Wallace MC: Eastern Neuroradiological Society, Baltimore, Maryland, August 1998. Spinal type I perimedullary arteriovenous fistula (AVF): Presentation, imaging and management.

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).

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).

Growth factors, receptors and signal transduction mechanisms. *Guha A*, Becker L: Physicians Services Incorporated Foundation (\$130,000 1996 - 1998).

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*: 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).

Microdialysis of the injured spinal cord. *Tator CH*: Canadian Paraplegic Association (\$14,000 1998).

Neoangiogenesis in cerebral ischemia. *Guha A, Wallace MC, Nagy A*: Heart and Stroke Foundation (\$152,300 1998 - 2000).

Overcoming the inhibition of axonal growth in the central nervous system of adult mammals. *Lozano A*: Medical Research Council of Canada (\$296,550 1996 - 1999).

p53 protection of radiation injury in a rat brain tumor model. *Bernstein M, Rutka J*: Ontario Cancer Institute (\$50,000 1998 - 2000).

Ras mediated signalling by EGF-R and PDGF-R in human malignant astrocytomas. *Guha A*: Medical Research Council of Canada (\$302,000 1996 - 1999).

Regeneration after neurotrauma. *Tator CH*: Samuel Lunenfeld Foundation (\$50,000 1997 - 1998).

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 calpain antagonists in the treatment of acute spinal cord injury. *Fehlings MG*: Cephalon Incorporated (\$35,000 1996 - 1998).

Role of metabotropic glutamate receptors in acute spinal cord injury. *Fehlings MG*: Physicians Services Incorporated Foundation (\$123,000 1998 - 2000).

Role of ras activation and regulation of vascular endothelial growth factor/vascular permeability factor. *Guha A*: National Neurofibromatosis Foundation (\$100,000 1996 - 1998).

Signal transduction pathways in human nervous system tumors. *Guha A*: National Cancer Institute of Canada (\$302,000 1997 - 1999).

Studies of regeneration in the injured spinal cord. *Tator CH*: Ontario March of Dimes (\$30,000 1999 - 2000).

Support of Canadian Paraplegic Association spinal cord injury research laboratory. *Tator CH*: Canadian Paraplegic Association (\$34,000 1996 - 1999).

Thalamic mechanisms of pain. *Dostrovsky J*, Davis KD, Lozano A: National Institutes of Health (\$361,000 1997 - 1999).

The role of the NGF receptors TrkA and p75 and calcium in neurite regeneration. *Tator CH*: Ontario Neurotrauma Foundation (\$41,000 1999 - 2001).

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*: James H. Cummings Foundation (\$30,000 1997 - 1998).

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).

HONOURS RECEIVED

Fehlings MG: Robert O. Lawson Chair in Neural Repair and Regeneration, University of Toronto, May 1999.

Fehlings MG: Premier's Research Excellence Award, May 1999.

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. G.J. Lloyd - Associate Professor

Dr. N.N. Mahomed - Assistant Professor

Dr. K.W. Marshall - Assistant Professor

Dr. A. Miniaci - Associate Professor

Dr. D.J. Ogilvie-Harris - Associate Professor

Dr. H.P. von Schroeder — Assistant Professor

Dr. T.A. Wright - Assistant Professor

PUBLICATIONS

Al-Kaisy A, McGuire G, Chan VWS, Bruin G, Peng P, Miniaci A, Perlas A: Analgesic effect of interscalene block using low-dose bupivacaine for out-patient arthroscopic shoulder surgery. *Regional Anesthesia and Pain Medicine* 1998 September; 23(5): pp 469-473.

Berlet G, Mascia A, Miniaci A: Treatment of unstable osteochondritis dissecans lesions of the knee using autogenous osteochondral grafts. *Arthroscopy: The Journal of Arthroscopic and Related Surgery* 1999 April; 15(3): pp 1-6.

Clarnette RG, Miniaci A: Baseball injuries. In: *Handbook of Sports Injuries* (Bull RC, ed). McGraw-Hill Incorporated, Chicago 1999: pp 361-388.

Damyanovich AZ, Staples JR, Marshall KW: 1H-NMR investigation of changes in the metabolic profile of synovial fluid in bilateral canine osteoarthritis with unilateral joint denervation. *Osteoarthritis and Cartilage* 1999 March: 7(2): pp 165-172.

Damyanovich AZ, Staples JR, Marshall KW: A comparative study of normal and osteoarthritic canine synovial fluid using 500 MHz 1H-MR spectroscopy. *Journal of Orthopaedic Research* 1999 February: 17(2): pp 223-231.

Graham B, Breidenbach WC, Adkins P, Tsai T-M: Major replantation versus revision amputation and prosthetic fitting in the upper extremity: A late functional outcomes study. *Journal of Hand Surgery* 1998 July: 23: pp 783-791.

Marshall KW: Viscosupplementation for osteoarthritis: Current status, unresolved issues and future directions. *Journal of Rheumatology* 1998 November: 25(11): pp 2056-2058.

Marshall KW: Viscosupplementation for treating osteoarthritis. *Journal of the Canadian Rheumatology Association* 1998 September: 9: pp 12-14.

Miniaci A: Treatment of osteochondral defects of the knee. Proceedings, Specialty Day, Arthroscopy Association of North America (Arthroscopy Association of North America, ed). Anaheim 1999 April: pp 145-150.

Miniaci A: Treatment of osteochondral defects of the knee. Book of Abstracts and Instructional Course Outlines, Arthroscopy Association of North America (Arthroscopy Association of North America, ed). Anaheim 1999 April: pp 238-243.

Miniaci A: Lattisimus dorsi transfer for irreparable rotator cuff insufficiency. In: *Operative Techniques in Orthopaedics* (Fu FH, Williams GR, eds). W.B. Saunders Company, Philadelphia 1998: pp 246-252.

Myerthall S, Graham B: Osteonecrosis of the base of the second metacarpal: A case report. *Journal of Hand Surgery* 1999 January: 24: pp 853-855.

Ogilvie-Harris DJ: Ballet injuries. In: Handbook of Sports Injuries (Bull RC, ed). McGraw-Hill Incorporated, Chicago 1999: pp 623-646.

Yee AJ, Hearn T, Davey JR: In vitro comparison of biodegradable and ultra-high molecular weight polyethylene cement plug restrictors in femoral cement pressurization. *Clinical Orthopaedics and Related Research* 1999 June: 10: pp 16-22.

Yee AJ, Kreder H, Bookman I, Davey JR: A prospective randomized trial of hydroxylapatite femoral prostheses in cementless total hip arthroplasty: Three to seven year results. *Clinical Orthopaedics and Related Research* 1999 June: 10: pp 57-63.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Davey JR: Academy Workshop, Anaheim, California, February 1999. The role of lateral offset stems.

Davey JR: International Hip and Knee Panel, Irvine, California, February 1999. Case presentations.

Davey JR: Comprehensive Surgery of Primary and Revision Total Hip and Total Knee Arthroplasty, Steamboat, Colorado, January 1999. Dislocation following total hip arthroplasty.

Davey JR: Intercontinental Cemented Total Hip Symposium, Copenhagen, Denmark, October 1998. (1) Femoral offset, (2) Acetabular rings, (3) Dislocation following total hip arthroplasty.

Davey JR: South Western Total Joint Arthroplasty Symposium, Scottsdale, Arizona, October 1998. (1) Cemented femoral technique, (2) Ideal femoral stem design, (3) Femoral offset stems.

Davey JR: Innovations in Total Hip Arthroplasty, Pittsburgh, Pennsylvania, September 1998. (1) Acetabular design, (2) Acetabular rings, (3) Tapered cementless femoral stem design, (4) Cemented femoral stems.

Miniaci A: Sports Medicine Symposium, Red River Valley Sports Medicine Institute, Fargo, North Dakota, June 1999. (1) Massive rotator cuff tears, (2) Partial thickness and small full-thickness rotator cuff tears, (3) Limited motion following instability repairs.

Miniaci A: ISAKOS Congress, Washington, D.C., May 1999. (1) Course: Articular cartilage transplantation 1999, (2) Course: General session - track I, (3) Course: Harvesting techniques for osteochondral transplantation.

Miniaci A: Arthroscopy Association of North America, Vancouver, British Columbia, April 1999. (1) Investigation of two techniques for optimizing joint surface congruency following articular resurfacing with mosaic arthroplasty, (2) The effect of graft size and number on outcome of mosaic arthroplasty resurfacing: An experimental model in sheep, (3) The role of arthroscopy: An adjuvant treatment to high tibial osteotomy, (4) Shoulder, (5) Arthroscopic treatment of chondral injuries: Options and techniques.

Miniaci A: Euros, Rome, Italy, March 1999. Hemiarthroscopy for four part fractures.

Miniaci A: Zimmer Canada, Whistler, British Columbia, February 1999. (1) Shoulder anatomy and biomechanics, (2) Total shoulder arthroplasty.

Miniaci A: American Shoulder and Elbow Surgeons, Anaheim, California, February 1999. MRI's in athletes: Are they ever normal?

Miniaci A: Arthroscopy Association of North America, Anaheim, California, February 1999. Cartilage transfer.

Miniaci A: American Sports Medicine Institute, Birmingham, Alabama, January 1999. (1) Current research in articular cartilage transplantation, (2) 1999 injuries in baseball, (3) Panel.

Miniaci A: Princess Margaret Rose Hospital, Edinburgh, Scotland, September 1998. (1) Arthroscopic rotator cuff repairs, (2) Shoulder instability repair: Arthroscopic or open.

Miniaci A: Trauma Course, University of Montreal/Sacre-Coeur Hospital, Mont Tremblant, Quebec, August 1998. (1) Rotator cuff: Current concepts, (2) Shoulder instability, (3) Small group sessions: Difficult shoulder problems.

Ogilvie-Harris DJ: Visiting Professor, University of Hong Kong/Hong Kong Orthopaedic Association, Hong Kong, China, November 1998.

Ogilvie-Harris DJ: Visiting Professor, University of Singapore, Singapore, Malaysia, September 1998.

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

Assessment of the effects of polyurethane debris in osteoarthritic canine knees. *Marshall KW:* Advanced Bio-Surfaces (\$18,000 1997 - 1998).

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. *Katz JN, Mahomed NN, Baron J, Liang M:* National Institutes of Health (\$642,748 1998 - 1999).

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

Evaluation of the efficacy of a rehabilitation program after surgery for carpal tunnel syndrome: A randomized controlled trial. *Carette S, Graham B:* Arthritis Society (\$156,000 1999 - 2002).

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, Hawker G, Coyte P, Mahomed NN, Kreder H*: Medical Research Council of Canada (\$56,239 1999 - 2002).

Hemolink in total joint arthroplasty. *Davey JR*: Hemosol (\$75,000 1997 - 1998).

Hylan canine chondroprotection study. *Marshall KW*: Biomatrix Incorporated (\$65,000 1997 - 1998).

Hylan therapy for failed arthroscopic debridement. *Marshall KW*: Wyeth-Ayerst (\$65,000 1997 - 1998).

In vivo chondrocyte resurfacing and gene transfer in rat articular cartilage. *Marshall KW, Salo P, Doherty PJ*: Arthritis Society (\$60,000 1998 - 2000).

Low demand knee study. *Davey JR*: Smith and Nephew Richards (\$80,000 1996 - 1998).

Prediction and evaluation of outcomes of hip and knee arthroplasty based on post-operative in-patient versus home rehabilitation. *Mahomed NN*: Canadian Orthopaedic Foundation (\$10,000 1998 - 1999).

Prevention of osteoporosis related fractures. *Bogoch ER, Hawker G, Ridout R, Mahomed N*: Merck Frost Canada (\$68,000 1998 - 1999).

Prospective comparative analysis of tutoplast and MORE bone-patellar allografts for human ACL reconstruction. *Marshall KW*: Biodynamics (\$140,000 1995 - 1999).

Resurfacing canine articular cartilage with chondrocytes. *Marshall KW, Doherty PJ*: Hip Hip Horray/Canadian Orthopaedic Foundation (\$10,000 1998 - 1999).

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*, Barpm K, Liang MH, Harris WH, Mahomed N: Agency for Health Care Policy and Research (\$472,306 1998 - 2000).

HONOURS RECEIVED

Mahomed NN: Canadian Orthopaedic Research and Education Young Investigator Award, June 1999.

von Schroeder HP: Roscoe Reid Graham Scholarship, Department of Surgery, University of Toronto, September 1998.

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

Anastakis DJ, Reznick R, Regehr G, Cusimano M, Murnaghan J, Brown M, Hutchison C: Transfer of technical skills training from the bench model to the human model. *American Journal of Surgery* 1999 February: 177: pp 167-170.

Bonnard C, Anastakis DJ, Van Melle G, Narakas AO: Isolated and combined lesions of the axillary nerve: A review of 146 cases. *Journal of Bone and Joint Surgery* 1999 March: 81(2)B: pp 212-217.

Graham B, Breidenbach WC, Adkins P, Tsai T-M: Major replantation versus revision amputation and prosthetic fitting in the upper extremity: A late functional outcomes study. *Journal of Hand Surgery* 1998 July: 23: pp 783-791.

Gullane PJ, Pathak I, Neligan PC: Major flaps in head and neck. In: *New SIPac* (Blitzer A, ed). *American Academy of Otolaryngology*, Alexandria 1998: pp 105-116.

Gur E, Neligan PC: The vascularized pig fibula bone flap model: Effects of multiple segmental osteotomies on growth and viability. *Plastic and Reconstructive Surgery* 1999 April: 103: pp 1436-1442.

Lipa JE, Neligan PC, Perreault T, Baribeau J, Levine RH, Knowlton RJ, Pang CY: Vasoconstrictor effect of endothelin-1 in human skin: Role of ET_A and ET_B receptors. *American Journal of Physiology* 1999 February: 262: pp H359-H367.

Manktelow RT, Anastakis DJ: Functioning free muscle transfers. In: Green's Operative Hand Surgery, Fourth Edition (Green DP, ed). Churchill Livingstone, New York 1999: pp 1201-1219.

Myerthall S, Graham B: Osteonecrosis of the base of the second metacarpal: A case report. *Journal of Hand Surgery* 1999 January: 24: pp 853-855.

Neligan PC: Discussion: Tongue reconstruction: Outcomes with the rectus abdominis flap. *Plastic and Reconstructive Surgery* 1999 February: 103: pp 448-450.

Pang CY, Zhang J, Xu H, Lipa JE, Forrest CR, Neligan PC: Role and mechanism of endothelin-B receptors in mediating ET-1 induced vasoconstriction in pig skin. *American Journal of Physiology* 1998 September: pp R1066.

Smeele LE, Irish JC, Gullane PJ, Neligan PC, Brown DH, Rotstein LE, Gan BS: A retrospective comparison of the morbidity and cost of different reconstructive strategies in oral and oropharyngeal carcinoma. *Laryngoscope* 1999 May: 109: pp 800-804.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Anastakis DJ: Canadian Society of Plastic Surgeons, Montreal, Quebec, June 1999. Panel: Timing of peripheral nerve repair.

Manktelow RT: Lee Ramsay Straub Memorial Lecturer, Hospital for Special Surgery, New York, New York, May 1999. (1) Microneurovascular muscle transfer for functional deficits of the upper extremity, (2) A viewpoint on three difficult management problems, (3) The identification of the motor and sensory components of a mixed nerve injury, (4) The correction of scissor finger deformities, (5) Technical refinements in toe-to-thumb transfer.

Manktelow RT: American Society of Reconstructive Microsurgery, Kona, Hawaii, January 1999. Facial paralysis reconstruction.

Neligan PC: Facial Plastic Surgery, Palm Desert, California, April 1999. (1) Reconstruction of the total lower lip defect with the radial forearm free flap, (2) Myocutaneous flap following parotidectomy.

Neligan PC: American Academy of Facial Plastic and Reconstructive Surgery, April 1999. Reconstruction of the total lower lip defect with radial forearm free flap.

Neligan PC: Ghang Gung Memorial Hospital/Chang Gung University, Taipei, Taiwan, March 1999. Oromandibular reconstruction: The Toronto approach.

Neligan PC: Surgical Association of Republic of China, Taipei, Taiwan, March 1999. (1) Keynote address: A surgical and philosophical approach to the cranial base, (2) Panel: Microsurgical reconstruction of the face and neck.

Neligan PC: American Society of Reconstructive Microsurgery, Kona, Hawaii, January 1999. (1) An approach to the temporomandibular joint in mandibular reconstruction, (2) Course: Craniofacial reconstruction.

Neligan PC: British Association of Plastic Surgeons, London, England, December 1998. (1) Moderator: Complications in head and neck reconstruction, (2) Reconstruction of the cranial base, (3) Roundtable discussion: Complications in head and neck reconstruction, (4) Chair: Twenty-three cases of orbital roof fractures: A prospective review and new classification for treatment and prognosis.

Neligan PC: Plastic Surgery Educational Foundation/British Association of Plastic Surgeons, London, England, December 1998. (1) Co-Chair: Reconstructive program.

Neligan PC: European Board of Plastic, Reconstructive and Aesthetic Surgery, Berkshire, England, November 1998. (1) Skin flaps: Physiology, (2) Skin expansion.

Neligan PC: Seventh European Course in Plastic Surgery, Berkshire, England, November 1998. (1) Skin expansion, (2) Skin flaps: Physiology, (3) Reconstruction of the face: Soft tissue augmentation.

Neligan PC: American Society of Plastic and Reconstructive Surgeons, Boston, Massachusetts, October 1998. (1) Instructional course: Lip reconstruction following tumor ablation, (2) Moderator: Head and neck, (3) Instructional course: Multimedia presentations for education.

Neligan PC: International Microsurgical Society, Corfu, Greece, August 1998. (1) Managing complications in head and neck reconstruction, (2) Reconstruction of the lip, (3) Technical aspects of bone graft contouring in mandible reconstruction.

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

Allograft epiphyseal plate transplants with short term immunosuppression. *Neligan PC, Bray P:* Medical Research Council of Canada (\$108,100 1997 - 1999).

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).

Evaluation of the efficacy of a rehabilitation program after surgery for carpal tunnel syndrome: A randomized controlled trial. *Carette S, Graham B:* Arthritis Society (\$156,000 1999 - 2002).

Functional MRI: Mapping brain activity following amputation and peripheral nerve injury. *Anastakis DJ, Mikulis D:* Workers Safety and Insurance Board (\$45,000 1998 - 2000).

The efficacy of acute pharmacologic pre-conditioning of cultured human skeletal muscle cells against infarction. *Forrest C, Neligan PC, Pang CY:* Plastic Surgery Educational Foundation (\$4,500 1998 - 1999).

HONOURS RECEIVED

von Schroeder HP: Roscoe Reid Graham Scholarship, Department of Surgery, University of Toronto, September 1998.

DIVISION OF THORACIC SURGERY

Dr. G.E. Darling - Assistant Professor
Dr. M.R. Johnston - Associate Professor
Dr. S.H. Keshavjee - Assistant Professor
Dr. M.F. McKneally - Professor
Dr. T.R.J. Todd - Professor (*Division Head*)
Dr. T.L. Winton - Assistant Professor

PUBLICATIONS

Boehler A, Bai XH, Liu M, Cassivi S, Chamberlain D, Slutsky AS, Keshavjee S: Up-regulation of T-helper-1 cytokines and chemokine expression in post-transplant airway obliteration. *American Journal of Respiratory Critical Care Medicine* 1999 January; 159(6): pp 1910-1917.

Cassivi SD, Liu M, Boehler A, Tanswell AK, Slutsky AS, Keshavjee S: Transgene expression following adenoviral-mediated retransfection of rat lungs in increased and prolonged transplant immunosuppression. *Journal of Thoracic and Cardiovascular Surgery* 1999 February; 117(1): pp 1-7.

Casson AG, Johnston MR: *Key Topics in Thoracic Surgery*, Bio Scientific Publishers, Oxford 1999: pp 1-282.

Darling G, Dresler CM: The clinical presentations of lung cancer. In: *General Thoracic Surgery* (Shields T, ed). Lippincott-Williams and Wilkins, Philadelphia 1998: pp 148-156.

DeCampos KN, Keshavjee S, Liu M, Slutsky AS: Prevention of rapid reperfusion-induced lung injury with prostaglandin E1 during the initial period of reperfusion. *Journal of Heart Lung Transplant* 1998 November: 17(11): pp 1121-1128.

Howard RB, Mullen JBM, Pagura ME, Johnston MR: Characterization of a highly metastatic, orthotopic lung cancer model in the nude rat. *Clinical and Experimental Metastasis* 1999 January: pp 1-6.

Lapp GC, Brown DH, Gullane PJ, McKneally M: Thoracoscopic management of chylous fistulae. *American Journal of Otolaryngology* 1998 July: 19: pp 257-262.

Maziak DE, Meade MO, Todd TRJ: The timing of tracheotomy: A systematic review. *Chest* 1998 August: 114: pp 605-609.

McKneally MF: Ethical problems in surgery: Innovation leading to unforeseen complications. *World Journal of Surgery* 1998 July: 23(8): pp 786-788.

Peralta RC, Casson AG, Wang RN, Keshavjee S, Redston M, Bapat B: Distinct regions of frequent loss of heterozygosity of chromosome 5P and 5Q in human esophageal cancer. *International Journal of Cancer* 1998 November: 78(5): pp 600-605.

Pierre AF, DeCampos KN, Liu M, Edwards V, Cutz E, Slutsky AS, Keshavjee SH: Rapid reperfusion causes stress failure in ischemic rat lungs. *Journal of Thoracic and Cardiovascular Surgery* 1999 January: 116(6): pp 932-942.

Pierre AF, Xavier A, Liu M, Cassivi S, Lindsay TF, Marsh H, Slutsky AS, Keshavjee SH: The effect of complement inhibition with soluble complement receptor-1 on pig allotransplant lung function. *Transplantation* 1998 September: 66(6): pp 723-732.

Todd TR, Pearson FG: Subglottic tracheal resection. *Operative Techniques in Thoracic and Cardiovascular Surgery: A Comparative Atlas* 1998 August: 3: pp 154-165.

Waddell TK, Keshavjee SH: Lung transplantation for chronic obstructive pulmonary disease. *Seminars in Thoracic and Cardiovascular Surgery* 1998 July; 10(3): pp 191-201.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Darling GE: Association for Surgical Education, Toronto, Ontario, May 1999. (1) Laparoscopic fundoplication: Lessons learned, (2) Neoadjuvant therapy for carcinoma of the esophagus, (3) Staging the mediastinum in 1999, (4) Post-operative respiratory failure.

Darling GE: Royal College of Physicians and Surgeons of Canada/Canadian Association of Thoracic Surgeons, Toronto, Ontario, September 1998. Combined modality therapy for lung cancer.

Darling GE: Canadian Association of Thoracic Surgery, Montreal, Quebec, August 1998. The new staging system for lung cancer.

Johnston MR: Glaxo Seminar, Toronto, Ontario, March 1999. Lung cancer: A surgeon's perspective.

Keshavjee SH: University of California, Los Angeles, California, June 1999. Gene therapeutic approaches to transplant related acute lung injury.

Keshavjee SH: American Thoracic Society, San Diego, California, April 1999. State of the art in lung transplantation management of graft dysfunction.

Keshavjee SH: North American Thoracic Society, Montreal, Quebec, October 1998. Update in lung transplantation for cystic fibrosis.

McKneally MF: Society of Cardiovascular Anesthesiologists, Breckenridge, Colorado, March 1999. (1) M & M conference: Investigation of a plane crash, (2) Case discussion: Hazards of innovation.

McKneally MF: Royal College of Physicians and Surgeons of Canada/ College of Family Physicians of Canada, Toronto, Ontario, September 1998. (1) Teaching bioethics in postgraduate medical education, (2) The ethics of relationships in the clinical encounter.

Todd TRJ: Controversies in Cardiothoracic Surgery, Hong Kong, China, November 1998. (1) Transcervical thymectomy, (2) Patient selection for lung volume reduction surgery, (3) Debate: Metastatic lung disease: Median sternotomy or VATS?

Todd TRJ: Canadian Association of Thoracic Surgery, Toronto, Ontario, September 1998. Thoracic surgical specialty training: Three versus six year program.

Todd TRJ: Tri-State Consecutive Case Conference on Lung Disease, Amelia Island, Florida, September 1998. Pulmonary transplantation: Where we have come from and where we should be going.

Todd TRJ: Canadian Association of Thoracic Surgery, Montreal, Quebec, August 1998. Surgery for diffuse emphysema.

Winton TL: National Cancer Institute of Canada, Toronto, Ontario, April 1999. Non-small cell lung cancer - BR.10: Adjuvant navelbine/cisplatin in stage 1-11 NSCLC.

Winton TL: Symposium on Non-Small Cell Lung Cancer Stage III, Montreal, Quebec, October 1998. Surgical considerations in the management of non-small cell 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*: Canadian Cystic Fibrosis Foundation (\$64,922 1998 - 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).

Early detection of second primary lung cancers by sputum cytology immunostaining. *Tockman MS, Johnston MR*: Chiron Corporation (\$150,000 1998 - 2001).

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).

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).

Mechanisms of cellular injury in human lung transplantation. *Liu M, Keshavjee S*: Ontario Thoracic Society (\$82,000 1998).

Medical student home study model: Breast diseases and early diagnosis of breast cancer. *Chart P, Darling G, Poldre P, Taylor G, Franassen E, Tipping J*: National Breast Cancer Fund (\$10,000 1998 - 1999).

Minimally invasive, video assisted thoracic surgery. *McKneally MF, Latner/Dynacare* (\$125,000 1992 - 1998).

Pilot study: Evaluation of antibodies and RNA probes to hnRNP in subjects with stage I or stage II lung cancer and in subjects with no current lung cancer or history of lung cancer. *Tockman MS, Johnston MR*: Chiron Corporation (\$75,000 1998 - 1999).

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 IL-10 in allograft transplant induced obliterative airway lesions. *Keshavjee SH, Liu M*: Canadian Cystic Fibrosis Foundation (\$120,000 1997 - 1999).

HONOURS RECEIVED

Keshavjee SH: George Armstrong-Peters Prize, Department of Surgery, University of Toronto, May 1999.

DIVISION OF UROLOGY

Dr. G.A. Farrow - Assistant Professor
Dr. M.M. Hassouna — Associate Professor
Dr. M.A.S. Jewett - Professor (*Division Head*)
Dr. S.B. Radomski — Assistant Professor
Dr. M. Robinette - Associate Professor
Dr. R.J. Stewart - Assistant Professor
Dr. J.Trachtenberg - Professor

PUBLICATIONS

Akaza H, Kurth KH, Williams R, Hinotsu S, Jewett MAS, Naito K, Okada K, Schellhammer PF, Van Velthoven RF, Wittes JA: Intravesicle chemotherapy and immunotherapy for superficial tumors: Basic mechanism of action and future direction. *Urologic Oncology* 1998 October: 4: pp 121-129.

Catton C, Jewett MAS, O’Sullivan B, Kandel R: Paratesticular sarcoma: Failure patterns after definitive local therapy. *Journal of Urology* 1999 June: 161: pp 1844-1847.

Fleshner N, Trachtenberg J: Sequential androgen blockade in advanced prostate cancer. *Molecular Urology* 1998 October: 2(3): pp 201-207.

Goldenberg SL, Ramsey EW, Jewett MAS: Prostate cancer: Surgical treatment of localized disease. *Canadian Medical Association Journal* 1998 November: 159: pp 1265-1272.

Green J, Jewett MAS: Urinary diversion: The past, present and next millennium. *Ostomy Canada* 1999 April: 7: pp 30-31.

Hudson PB, Trachtenberg J: Efficacy of finasteride is maintained in patients with benign prostatic hyperplasia treated for five years. *Urology* 1999 April: 53: pp 4.

Jewett MAS, Bombardier C, Logan AG, Psihramis K, Wesley-James T, Mahoney JE, Luymes J, Ibanez D, Ryan M, Honey RJ: A randomized controlled trial to assess the incidence of new onset hypertension in patients after ESWL therapy for symptomatic renal calculi. *Journal of Urology* 1998 September: 160: pp 101-113.

Jewett MAS, Iscoe NA: Prostate Cancer: The Clinical Basics Series. (Jewett MAS, Iscoe NA, eds). Canadian Medical Association, Ottawa 1999.

Jewett MAS, Valiquette L, Sampson HA, Katz J, Fradet Y, Redelmeier D: Electromotive drug administration of lidocaine as an alternative anesthesia for transurethral surgery. *Journal of Urology* 1999 February: 161: pp 482-485.

Kirby R, Robertson C, Turkes A, Trachtenberg J: Finasteride in association with either flutamide or goserelin as combination hormonal therapy in patients with stage M1 carcinoma of the prostate. *The Prostate* 1999 June: 40(105): pp 107-114.

Klotz L, Goldenberg SL, Jewett MAS, Barkin J, Chetner M, Fradet Y, Chin J, Laplante S: CUOG randomized trial of neoadjuvant androgen ablation before radical prostatectomy: Thirty-six month post-treatment PSA results. *Urology* 1999 April: 53: pp 757-763.

Lancaster C, Trachtenberg J: Interstitial microwave thermoablation for localized prostate cancer. *Urology* 1999 April: 53(4): pp 828-831.

Lee H, Warde P, Jewett MAS: Review: Neoadjuvant hormonal therapy in carcinoma of the prostate. *British Journal of Urology* 1999 March: 83: pp 438-448.

Nam RK, Fleshner N, Trachtenberg J: Prevalence and patterns of use of complementary therapies among prostate cancer patients: An epidemiological analysis. *Journal of Urology* 1999 May: 161(5): pp 1521-1524.

Nam RK, Jewett MAS, Krahn MD: Prostate cancer: Natural history. *Canadian Medical Association Journal* 1998 September: 159: pp 685-691.

Piercey GB, Deber R, Trachtenberg J: The impact of a shared decision-making program on patients with benign prostatic hyperplasia. *Urology* 1999 April: 53(5): pp 913-920.

Preiner JL, Jewett MAS: Role for retroperitoneal lymphadenectomy for testis cancer. *Current Opinion in Urology* 1999 May: 9: pp 205-208.

Richie JP, Jewett MAS, Bono A, Denis LJ, Ten Kate JW, Kotake T, Kakizoe T, Shirai T: TNM classification of bladder cancer based on current histological and imaging methods. *Journal of Urologic Oncology* 1998 October: 4: pp 130-138.

Sharir S, Jewett MAS, Sturgeon J, Moore M, Warde PF, Catton C, Gospodarowicz M: Progression detection of stage I nonseminomatous testis cancer on surveillance: Implications for the follow-up protocol. *Journal of Urology* 1999 February: 161: pp 472-476.

Sharir S, Sturgeon JFG, Moore M, Warde PR, Catton CN, Gospodarowicz M, Jewett MAS: Optimizing the surveillance protocol for stage I nonseminomatous testis tumor. In: *Germ Cell Tumors IV* (Jones WG, Appleyard I, Harnden P, Joffe JK, eds). John Libbey and Company, London 1998: pp 184-186.

Sharir S, Warde P, Jewett MAS: Optimizing the surveillance protocol for stage I nonseminoma results in significant cost savings. In: *Germ Cell Tumors IV* (Jones WG, Appleyard I, Harnden P, Joffe JK, eds). John Libbey and Company, London 1998: pp 381-382.

Trachtenberg J: Prostate cancer: Alternative approaches and the future of treatment. *Canadian Medical Association Journal* 1999 February: 160(4): pp 528-534.

Vlaovic P, Jewett MAS: Cyclophosphamide-induced bladder cancer. *Canadian Journal of Urology* 1999 April: 6: pp 745-747.

Warde P, Jewett MAS: Surveillance for stage I testicular seminoma: Is it a good option? In: *Urologic Clinics of North America* (Carroll PR, Presti JC, eds). W.B. Saunders Company, Philadelphia 1998: pp 425-433.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Jewett MAS: Canadian Urological Association, London, Ontario, June 1999. Randomized phase III study of intra-operative cavernous nerve stimulation with penile tumescence monitoring to improve nerve sparing during radical prostatectomy.

Jewett MAS: Canadian Academy of Urological Surgeons, London, Ontario, June 1999. Why academic urology should do clinical trials.

Jewett MAS: Forest Hill Lions Club, Toronto, Ontario, June 1999. Urological cancer (kidney, bladder, prostate) and you.

Jewett MAS: American Urological Association, Dallas, Texas, May 1999. (1) Point-counterpoint stage one testicular cancer: Lymph node dissection, (2) Testicular malignancy update.

Jewett MAS: British Association of Urological Surgeons/Royal College of Physicians and Surgeons of Scotland, Edinburgh, Scotland, October 1998. (1) Surgery versus surveillance for teratoma of the testis: RPLND should be performed routinely in stage one teratomas, (2) Chemotherapy for testicular cancer.

Jewett MAS: Ontario Hydro, Toronto, Ontario, September 1998. Prostate cancer.

Jewett MAS: Sociedad Colombiana de Urologia, Cartagena, Colombia, September 1998. (1) The natural history of early stage prostate cancer: Is watchful waiting an option?, (2) The management of early stage testis cancer: Issues and controversies.

Jewett MAS: United Ostomy Association of Canada, Toronto, Ontario, August 1998. Urinary diversion: Past, present and in the next millennium.

Stewart RJ: Visiting Professor, University of British Columbia, Vancouver, British Columbia, September 1998. Hormonal regulation of prostate cancer and angiogenesis and current research on angiopoietin.

Trachtenberg J: Kaiser Permanente, Monterey, California, December 1998. Transperineal microwave thermoablation of prostate cancer.

Trachtenberg J: National Institutes of Health/University of Brussels, Brussels, Belgium, October 1998. Nutritional aspects of prostate cancer.

Trachtenberg J: CaPCure, Lake Tahoe, Nevada, September 1998. Advanced prostate cancer.

Trachtenberg J: World Endourology Congress, New York, New York, September 1998. Interstitial thermoablation of localized prostate cancer.

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

A clinical evaluation of the SPOT nerve stimulator for use during radical prostatectomy. *Jewett MAS:* Uromed (\$40,000 1997 - 1999).

Bropirimine phase III: Bropirimine versus BCG in bladder CIS. *Jewett MAS:* Upjohn-Pharmacia (\$36,088 1994 - 1998).

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).

Effects of 5 alpha reductase on prostate cancer: Histopathological correlates. *Trachtenberg J:* Glaxo Pharmaceuticals (\$22,000 1998 - 1999).

Effects of an endothelin inhibitor on hormone refractory prostate cancer. *Trachtenberg J:* Abbott Laboratories (\$15,000 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 (\$300,000 1998 - 2000).

Immunocyt TM1 preliminary study (alpha testing). *Jewett MAS:* DiagnoCure (\$10,000 1997 - 1998).

Liarazole in hormone refractory prostate cancer. *Trachtenberg J*: Janssen Research Foundation (\$100,000 1997 - 1999).

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 causes of hormone refractory prostate cancer. *Trachtenberg J, Brown T, McLusky N*: Janssen Research Foundation/PMAC/Medical Research Council of Canada (\$150,000 1997 - 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 (\$370,000 1998 - 2001).

Non-metastatic renal cell carcinoma GU group protocol 30904. *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 - 1999).

Randomized controlled study of neoadjuvant reversible androgen withdrawal therapy in the surgical management of localized prostate cancer. *Jewett MAS*: Canadian Uro-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 Uro-Oncology Group (\$33,000 1996 - 2000).

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

Boyd AJ, Rubin BB, Walker PM, Romaschin A, Issekutz TB, Lindsay TF: A monoclonal antibody against CD18 reduces acute intestinal and pulmonary injury in model of ruptured abdominal aortic aneurysm. *Heart* 1999 June: 277: pp 172-182.

Boylan J, Katz J, Kavanagh B, Klinck J, Cheng D, Demajo W, Walker P, Johnston KW, Sandler A: Epidural bupivacaine-morphine analgesia versus patient-controlled analgesia following abdominal aortic surgery: Analgesic, respiratory and myocardial effects. *Anesthesiology* 1998 September: 89(3): pp 585-593.

Cronenwett JL, Johnston KW: The United Kingdom small aneurysm trial: Implications for surgical treatment of abdominal aortic aneurysms. *Journal of Vascular Surgery* 1998 October: 29: pp 191-194.

Downey G, Butler J, Saltiel A, Rubin B, Tappes H, Grinstein S: Assessment of the role of MEK in neutrophil microbicidal responsiveness using PD098059A. *Journal of Immunology* 1998 September: 160: pp 434-443.

Gloviczki P, Kalman P, North American Study Group: Mid-term results of endoscopic perforator vein interruption for chronic venous insufficiency: Lessons learned from the North American subfascial endoscopic perforator surgery registry. *Journal of Vascular Surgery* 1999 March: 29: pp 489-502.

Jhirad R, Kalman PG: Mycotic axillary artery aneurysm. *Journal of Vascular Surgery* 1998 October: 28: pp 708-709.

Johnston KW: Life expectancy after surgical repair of nonruptured abdominal aortic aneurysm. In: *The Durability of Vascular and Endovascular Surgery* (Greenhalgh RM, ed). W.B. Saunders Company, Philadelphia 1999: pp 135-147.

Kalman PG, Rappaport DC, Merchant N, Clarke K, Johnston KW: The value of late computed tomographic scanning in identification of vascular abnormalities after abdominal aortic aneurysm repair. *Journal of Vascular Surgery* 1999 March: 29: pp 442-450.

Kalman PG, Taylor BV: Natural history of abdominal aortic aneurysms: Does size, sex, age and family matter? In: *Diagnosis and Treatment of Aortic and Peripheral Arterial Aneurysms* (Calligaro KD, Dougherty MJ, Hollier LH, eds). W.B. Saunders Company, Philadelphia 1999: pp 13-18.

Lindsay TF: Editorial: Topography of cell replication in human vein grafts. *Circulation* 1998 September: II: pp 329-330.

Lindsay TF, Luo XP, Lehotay DC, Rubin BB, Anderson M, Walker P, Romaschin AD: Ruptured abdominal aortic aneurysm: A "two hit" ischemia/reperfusion injury: Evidence from an analysis of oxidative products. *Journal of Vascular Surgery* 1999 April: 30(2): pp 219-228.

Maziak D, Kalman P, Lindsay T, Johnston K, Walker P: The impact of multiple organ dysfunction on mortality following ruptured abdominal aortic aneurysms. *Annals of Vascular Surgery* 1998 July: 12(2): pp 93-100.

Pierre AF, Xavier AM, Liu M, Cassivi SD, Lindsay TF, Marsh HC, Slutsky AS, Keshavjee SH: Effect of complement inhibition with soluble complement receptor-1 on pig allotransplant lung function. *Transplantation* 1998 September: 66(6): pp 723-732.

Romaschin A, Walker P, Jackowski G, Price J, Harris D, Foster D, Ribeiro M, Marshall J: A rapid bioassay of endotoxin in whole blood using neutrophil dependent chemiluminescence. *Journal of Immunology* 1998 July: 212(2): pp 169-185.

Taylor BV, Oudit GY, Kalman PG, Liu P: Clinical and pathophysiological effects of active and passive smoking on the cardiovascular system. *Canadian Journal of Cardiology* 1998 September; 14: pp 1129-1139.

Walker P: Current indications for carotid endarterectomy. *Canadian Journal of Surgery* 1998 July; 41(3): pp 214-217.

Walker P, Romaschin A, Davis S, Piovesan J: Lower limb ischemia: Phase 1 results of salvage perfusion. *Journal of Surgical Research* 1999 June; 84: pp 193-198.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Johnston KW: Boston University School of Medicine, Boston, Massachusetts, May 1999. Issues in the management of aortic aneurysms in a changing health care environment.

Johnston KW: University of Rochester, Rochester, New York, April 1999. Repair of occlusive disease of aortic arch arteries.

Johnston KW: Charing Cross International Symposium, London, England, April 1999. Life expectancy after surgical repair of non-ruptured abdominal aortic aneurysm.

Johnston KW: Baylor University, Houston, Texas, March 1999. Political and social issues in the management of abdominal aortic aneurysms.

Johnston KW: Council of Medical Specialty Societies, Chicago, Illinois, March 1999. Electronic journals: Internet techniques and continuing medical education.

Johnston KW: Toronto Vascular Surgery Symposium, Toronto, Ontario, March 1999. (1) Searching the medical literature, (2) Management of non-vascular complications of vascular surgery.

Johnston KW: Current Critical Problems, New Horizons and Techniques in Vascular and Endovascular Surgery, New York, New York, November 1998. Management of unusual problems associated with infrarenal abdominal aortic aneurysm repair.

Johnston KW: West Virginia University, Charleston, West Virginia, November 1998. Social, ethical and financial issues related to surgical management.

Johnston KW: Australasian and New Zealand Chapter of the International Society for Cardiovascular Surgery, Gold Coast, Australia, October 1998. (1) Practical and fundamental errors in carotid Doppler evaluation, (2) Repair of standard and unusual AAA's, (3) Issues in the management of AAA in a rapidly changing health care environment.

Johnston KW: Tooth Visiting Professor, University of Queensland/Royal Brisbane Hospital, Brisbane, Australia, September 1998. (1) Future health care changes and consequences on surgical practice, (2) Management of mesenteric ischemia, (3) Analyzing outcomes of surgical procedures, (4) Repair of standard and unusual abdominal aortic aneurysms, (5) Problems and solutions in reporting outcome of surgical and interventional procedures, (6) The clinician's perspective of the millennium "bug", (7) Issues in surgical care in rapidly changing health care systems.

Kalman PG: Canadian Association of Nephrology Nurses and Technologists, Toronto, Ontario, June 1999. A practical approach to vascular access for hemodialysis.

Kalman PG: Pennsylvania Hospital Vascular Symposium, Philadelphia, Pennsylvania, March 1999. Current management of lower extremity reperfusion syndrome: Compartment syndrome and myoglobinuria.

Kalman PG: Current Critical Problems, New Horizons and Techniques in Vascular and Endovascular Surgery, New York, New York, November 1998. Which aortoiliac occlusive lesions should be ballooned, stented or operated on?

Kalman PG: Pan American Congress on Vascular and Endovascular Surgery, Rio de Janeiro, Brazil, November 1998. (1) Mesenteric artery bypass: Early and late results, (2) Aortoiliac occlusive disease: What lesions should be ballooned, stented or operated on?, (3) Endovascular perforator vein surgery for the treatment of advanced chronic venous insufficiency.

Kalman PG: Hungarian Medical Association of America, Sarasota, Florida, October 1998. Aortoiliac occlusive disease: What lesions should be ballooned, stented or operated on?

Kalman PG: New England Society for Vascular Surgery, Toronto, Ontario, September 1998. Panelist: Case presentations.

Lindsay TF: Ontario Society of Diagnostic Medical Sonographs, Toronto, Ontario, October 1998. Carotid surgery without angiography.

Lindsay TF: University of Western Ontario, London, Ontario, October 1998. Organ injury after ruptured abdominal aorta aneurysm.

Lindsay TF: Nephrology Interchange Conference, Huntsville, Ontario, August 1998. The role of the vascular surgeon: How I do it.

Walker PM: Association for Academic Surgery, Seattle, Washington, November 1998. Lower limb ischemia: Phase 1 results of salvage perfusion.

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

A double-blind placebo-controlled clinical evaluation of REGRANEX (becaplermin) gel, in the healing of full-thickness diabetic ulcers of the forefoot after 20 weeks treatment. *Kalman PG:* Janssen-Ortho Incorporated (\$120,000 1997 - 1998).

Coronary hemodynamics and atherosclerosis. *Ojha M, Butany JW, Johnston KW:* Medical Research Council of Canada (\$119,580 1995 - 1998).

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).

Interventions in smoking cessation programming in a peripheral vascular disease population. *Irvine J, Ritvo P, Kalman PG, Hotz SB, Stewart D, Shaw BF*: Heart and Stroke Foundation (\$211,707 1996 - 1999).

Magnetic resonance imaging for ischemia. *Wright GA, Kalman PG, Merchant N*: Medical Research Council of Canada (\$133,187 1997 - 2000).

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*: IMPRA/BAIRD Award/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).

Oxidant-induced gene expression following ruptured abdominal aortic aneurysm. *Lindsay TF, Armstrong S*: Life-Line Foundation (\$2,784 1998).

Propranolol for small abdominal aortic aneurysms. *Laupacis A, Kalman PG*: Medical Research Council of Canada (\$2,200,000 1994 - 2000).

REGANEX for healing of chronic venous ulcers. *Kalman PG*: Janssen-Ortho Incorporated (\$60,000 1997 - 1998).

Role of phospholipase A2 in neutrophil arachidonate metabolism. *Rubin B*: J.P. Bickell Foundation (\$25,000 1998 - 1999).

Studies on the detection of cerebrovascular disease and measurement. *Johnston KW*, Cobbold RSC: Heart and Stroke Foundation (\$101,003 1996 - 1999).

The role of phospholipase A2 in neutrophil activation during myocardial ischemia. *Rubin BB*: Heart and Stroke Foundation (\$114,000 1997 - 1999).

HONOURS RECEIVED

Kalman PG: President, Canadian Society for Vascular Surgery, September 1998.

DIVISION OF BIOMEDICAL COMMUNICATIONS

D. Aldrich - Assistant Professor
K. Brine - Assistant Professor
K. Chorney - Lecturer
S. Gilbert - Professor Emeritus
C. Godkin — Assistant Professor
I. Healey — Lecturer
J. Jenkinson - Lecturer
N. Joy - Professor Emeritus
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)

Chorney K, Wilson-Pauwels L, Johnston M: Visualizing physiological concepts and research hypotheses: A hypermedia module of the drainage of the cerebrospinal fluid by lymphatics. *Journal of Biocommunication* 1998 July: 25(3): pp 25-32.

Godkin C: Designing an illustrated food web to teach ecological concepts: Challenges and solutions. *Journal of Biocommunication* 1999 January: 26(1): pp 2-11.

Godkin C: *Flying Lessons*. Fitzhenry & Whiteside, Toronto, 1999 (illustrated by **Godkin C**).

Godkin C: *Ladybug Garden*. Reprinted in: *Cornerstone 3a Anthology*. Gage Educational Publishing, Toronto, 1999 (illustrated by **Godkin C**).

Godkin C: Sea Otter Inlet Information Guide. Fitzhenry & Whiteside, Toronto, 1999 (illustrated by **Godkin C**).

Jenkinson J, Wilson-Pauwels L, Woolridge N, Jewett M: Development of a hypermedia program designed to assist patients with localized prostate cancer in making treatment decisions. *Journal of Biocommunication* 1998 July: 25(2): pp 2-11.

Midha R, Mackay MB: Peripheral nerve suture techniques. In: *Neurosurgical Operative Atlas* (Rengachary SS, ed). American Association of Neurological Surgeons, 1999: pp 261-269 (six illustrations by **Mackay MB**).

Ogilvie-Harris DJ, Gilbert MK, Chorney K: Chronic pain following ankle sprains in athletes: The role of arthroscopic surgery. *Arthroscopy* 1998 August: 13(5): pp 564-574 (seven illustrations by **Chorney K**).

Whalley MA, Minta J, Wilson-Pauwels L, Woolridge N: A three-dimensional animation of the classical pathway of the complement cascade. *Journal of Biocommunication* 1998 July: 25(4): pp 18-28.

TEXTBOOK ILLUSTRATIONS

Dengler NG, Nelson T: Leaf structure and development in C4 plants. In: *C4 Plant Biology* (Sage R, Monson R, eds). Academic Press, Toronto, 1999 (five three-dimensional diagrams by **Godkin C**).

Du Gas B, Knor E: *Nursing Foundations: A Canadian Perspective, Second Edition*. Prentice Hall Canada, Scarborough, 1999 (fifty illustrations by **Mazierski D**).

Hilker D, Harper S: *Elements of English*. Harcourt Brace & Company Canada, Toronto, 1999 (one illustration by **Mazierski D**).

Iscoe N, Jewett M: Prostate cancer: Balancing the risks in diagnosis and treatment. Canadian Medical Association, Ottawa, 1999 (two illustrations by **Jenkinson J**).

Richards RR: Shoulder instability. In: Orthopaedic Surgery: The Essentials (Baratz AD, Imbriglia JE, eds). Thieme Publications, New York 1999: pp 257-274 (eleven illustrations by **Mackay MB**).

Ritter B: Nelson science and technology: Cells, tissues, organs and systems. Nelson Thompson Learning, Scarborough, 1999 (thirty illustrations by **Mazierski D**).

JOURNAL ILLUSTRATIONS

Blaine S: The genetics revolution: Implications for family physicians and their patients. Patient Care Canada 1999 April: 10(4): 46-67 (one illustration and cover by **Tulk S**).

Blouin F: Dossier clinique: C est votre menopause, Madame... L Omnipraticien 1998 September: 2(16): pp 9-24 (one illustration by **Tulk S**).

Burgess JH: Minimize cardio risks if family history of sudden death. Patient Care Canada 1998 August: 9(8): pp 10 (one illustration by **Tulk S**).

Godkin C: Designing an illustrated food web to teach ecological concepts: Challenges and solutions. Journal of Biocommunication 1999 January: 26(1): pp 2-11 (two illustrations by **Chorney K**).

Goodridge AE: Testing for upper motor neuron lesions. Patient Care Canada 1998 December: 9(12): pp 19 (one illustration by **Tulk S**).

Holtby RM: Managing recurrent shoulder dislocation. Patient Care Canada 1998 August: 9(8): pp 7 (one illustration by **Tulk S**).

Ipp M: Pervasive developmental delay: Manifests in infancy. Patient Care Canada 1998 July: 9(7): pp 18 (one illustration by **Tulk S**).

Leyland N: Treatment of endometriosis. Journal of the Society of Obstetricians and Gynecologists of Canada 1999 January: 21(6): pp 10-15 (one illustration by **Mackay MB**).

Liu B: Insomnia in the elderly. *Patient Care Canada* 1998 October: 9(10): pp 76-87 (one illustration by **Tulk S**).

Marshall KG: Perils of prevention: Deceptive benefits. *Patient Care Canada* 1998 November: 9(11): pp 82-90 (one illustration by **Tulk S**).

Marshall KG: Too many guiding hands. *Family Practice* 1999 May: 11(9): pp 1 (one illustration by **Tulk S**).

McGraw RC, Miller M: Chest pain in the ER: The new serum markers. *Patient Care Canada* 1998 October: 9(10): pp 33-35 (one illustration by **Tulk S**).

Nesbitt L: How to easily treat acute ingrown nails. *Patient Care Canada* 1998 July: 9(7): pp 22-23 (six illustrations by **Tulk S**).

Pare M, McIlwaine J, Rosenbluth M: Managing borderline personality disorders: Ten dos and don t. *Patient Care Canada* 1998 July: 9(7): pp 38-63 (cover and inside illustrations by **Tulk S**).

Pryse-Phillips W: Screening with family history of cerebral aneurysm. *Patient Care Canada* 1999 February: 10(2): pp 7 (one illustration by **Tulk S**).

Purdy A: The cerebellar examination. *Patient Care Canada* 1999 February: 10(2): pp 51 (one illustration by **Tulk S**).

Salit I, Harmathy T: Treating common office infections. *The Medical Post* 1999 January: 12: pp Q1 (illustrated by **Mazierski D**).

Thommasen H, Ipp M, Burden G: How I treat abdominal pain in an eight year old child. *Family Practice* 1999 January: 11(6): pp 19 (one illustration and cover by **Tulk S**).

Todd TR, Pearson FG: Subglottic tracheal resection: Surgical techniques. *Operative Techniques in Cardiac and Thoracic Surgery: A Comparative Atlas* 1998 July: 3(3): pp 154-165 (nine illustrations by **Mackay MB**).

Trachtenberg J, Crook J, Tannock IF: Prostate cancer: Alternative approaches and the future of treatment. *Canadian Medical Association Journal* 1999 January: 160(4): pp 528-534 (two illustrations by **Jenkinson J**).

Tuli S, Hulbert RJ, Mikulis D, Fleming JFR: Nintey-degree rotation of the thoracic spinal thecal sac. *Neurosurgery* 1998 July: 89(1): pp 133-138 (two illustrations and cover by **Mackay MB**).

Wetmore SJ, Tannenbaum D, Rockel AJ: How I treat neck pain after a rear-end collision. *Family Practice* 1999 May: 11(10): pp 19-20 (one illustration and cover by **Tulk S**).

White CT: Urinary tract infections in children: Approach to diagnosis and management. *Patient Care Canada* 1999 April: 10(4): pp 28-36 (one illustration by **Tulk S**).

Winston HA, Landry GL, Lillegard WA, Rice SG: Preventing sports injuries in kids. *Patient Care Canada* 1998 December: 9(12): pp 30-47 (one illustration and cover by **Tulk S**).

PHARMACEUTICAL ILLUSTRATIONS

Boehringer Ingelheim: Understanding chronic obstructive pulmonary disease. 1999 (four illustrations by **Chorney K**).

Janssen Ortho: Diabetic foot care. 1999 (twelve illustrations by **Chorney K**).

Pharmacia and Upjohn: Colorectal cancer. 1999 (eight illustrations by **Chorney K**).

Proctor and Gamble: Ulcerative colitis. 1999 (one illustration by **Chorney K**).

Roberts Pharmaceuticals: Autonomic nervous system. 1998 (seven illustrations by **Chorney K**).

SmithKline Beecham Pharmaceuticals: The respiratory tract. 1999 (nine illustrations by **Chorney K**).

Warner and Lambert: The respiratory system. 1998 (five illustrations by **Chorney K**).

Wyeth-Lederle: Understanding severe childhood infections. 1999 (twelve illustrations by **Chorney K**).

Zeneca Pharma: Understanding chronic heart failure. 1999 (eight illustrations by **Chorney K**).

MEDICAL LEGAL ILLUSTRATIONS (storyboard and digital output)

Lax L: Injury in the right caudate nucleus and the left cerebellum. Cassels, Brock and Blackwell Barristers & Solicitors, Toronto, 1998.

MULTIMEDIA/HYPERMEDIA

New Media Design

Jenkinson J: The Prostate Centre: A Guide to Recovery from Prostate Cancer. University Health Network, University of Toronto, 1999.

Feature Film Storyboards

Brine K: Bait. Castle Rock Studios, 1998.

Brine K: Hurricane. Beacon Studios, 1998.

Brine K: Superstar. Paramount Studios, 1998.

Television Storyboards

Brine K: The Famous Jett Jackson . Disney, 1998.

Brine K: Legacy. UPN, 1998.

HEALTH COMMUNICATIONS

Mazierski D: A guide to understanding cardiovascular disease. Headcan/Bayer Incorporated, Etobicoke, 1998. Patient education teaching easel.

Mazierski D: Understanding depression. Headcan/Wyeth-Ayerst Canada, Montreal, 1998. Patient education poster.

Mazierski D: Understanding heart failure. Headcan/Janssen-Ortho Incorporated, Toronto, 1999. Patient education poster.

Mazierski D: Understanding glaucoma. Headcan/Pharmacia and Upjohn, Mississauga, 1999. Patient education poster.

Mazierski D: Understanding blepharitis. Headcan/Alcon Canada Incorporated, Mississauga, 1999. Patient education poster.

Mazierski D: The proper use of the sulcabrush travel cleansing device for enhanced dental hygiene. Sulcabrush, Downsview, 1999. Product illustration for use in sales material.

INVITED LECTURES

Chorney K: Association of Medical Illustrators, Toronto, Ontario, July 1998. (1) Animating in adobe photoshop, (2) The dynamics of lymphocyte circulation.

Godkin C: Sir Alexander Mackenzie School, Inuvik, Northwest Territories, April 1999. (1) Nine readings, (2) Workshop.

Godkin C: Toronto Board of Education, Toronto, Ontario, April 1999. Teaching ecology in the schools as part of the language arts curriculum.

Mackay MB: Visiting Professor, Cleveland Institute of Art, Cleveland, Ohio, January 1999. Introduction to surgical illustration.

Nancekivell S: American Medical Writers Association Conference, Vancouver, British Columbia, October 1998. (1) Organizing the biomedical paper, (2) Plain language.

Nancekivell S: Association of Medical Illustrators, Toronto, Ontario, July 1998. Yes, I d like to publish, but

RESEARCH AND INVESTIGATIONS

Senior Investigator s Name Appears in Italics

Documentation of the history of embryological illustration. *Gilbert S*, Jenkinson J: Vesalius Trust (\$5,200 1999).

HONOURS AND AWARDS

Chorney K: Award of Merit, Association of Medical Illustrators, July 1998.

Jenkinson J: Award of Excellence for Interactive Media, Association of Medical Illustrators, July 1998.

Jenkinson J: Certificate of Appreciation for Excellence in Teaching, Division of Biomedical Communications, University of Toronto, May 1999.

Lax L: Certificate of Appreciation for Excellence in Teaching, Division of Biomedical Communications, University of Toronto, May 1999.

RESEARCH

Dr. C.E. Bayliss - Professor
Dr. L. Burrows - Assistant Professor
Dr. D.W. Courtman - Assistant Professor
Dr. K.D. Davis - Assistant 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. Holliday - Research Associate
Dr. D.A. Houlden - Assistant Professor
Dr. W.D. Hutchison - Assistant Professor
Dr. A. Kapus - 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. M.W. Mittelman — Associate Professor
Dr. C.Y. Pang - Professor
Dr. R. Rameseshan - Lecturer
Dr. J.S. Sandhu - Assistant Professor
Dr. G.A. Tait - Assistant Professor
Dr. E. Theriault - Assistant Professor
Dr. J.A. Wade - Professor
Dr. C. Wittnich - Associate Professor

PUBLICATIONS

Chiu J, Brian JF, Wu P, Eubanks JH, Zhang L, Reynolds JN: Chronic ethanol exposure alters MK-801 binding sites in the cerebral cortex of the near term fetal guinea pig. *Alcohol* 1999 April; 17: pp 215-221.

Chung I, Zhang Y, Eubanks JH, Zhang L: Attenuation of hypoxic current by intracellular applications of ATP regenerating agents in hippocampal CA1 neurons of rat brain slices. *Neuroscience* 1998 October; 86: pp 1101-1107.

Davis KD, Kwan CL, Crawley AP, Mikulis DJ: Event-related fMRI of pain: Entering a new era in imaging pain. *Neuroreport* 1998 October: 9: pp 3019-3023.

Davis KD, Kwan CL, Crawley AP, Mikulis DJ: Functional MRI study of thalamic and cortical activations evoked by cutaneous heat, cold and tactile stimuli. *Journal of Neurophysiology* 1998 October: 80: pp 1533-1546.

Davis KD, Lozano AM, Tasker RR, Manduch MM, Kiss ZHT, Dostrovsky JO: A thalamic relay site for cold perception in humans. *Journal of Neurophysiology* 1999 April: 81: pp 1970-1973.

Fernie GR, Maki BE: Research and development at the Centre for Studies in Aging. *Journal of the Rehabilitation Engineering Society of Japan* 1999 June: 14: pp 2.

Francis J, Zhang Y, Ho W, Wallace MC, Zhang L, Eubanks JH: Decreased hippocampal expression, but not functionality, of GABA(B) receptors after transient cerebral ischemia in rats. *Journal of Neurochemistry* 1999 January: 72: pp 87-94.

Hsu J, Zhang Y, Takagi N, Gurd JW, Wallace MC, Zhang L, Eubanks JH: Decreased expression and functionality of NMDA receptor complexes persist in the CA1, but not in the dentate gyrus after transient cerebral ischemia. *Journal of Cerebral Blood Flow and Metabolism* 1998 July: 18: pp 768-775.

Hutchison WD, Davis KD, Lozano AM, Tasker RR, Dostrovsky JO: Pain-related neurons in the human cingulate cortex. *Nature Neuroscience* 1999 May: 2: pp 403-405.

Inoue T, Santaguida PL, Fernie GR: Measurement of low back loads during manoeuvring tasks with lifting devices. *Proceedings, Annual Conference of the Rehabilitation Engineering Society of North America, Minneapolis* 1998 July.

Li GM, Li R-K, Mickle DAG, Weisel RD, Merante F, Ball WT, Christakis GT, Cusimano RJ, Williams WG: Elevated insulin-like growth factor 1 and transforming growth factor B-1 and their receptors in patients with idiopathic hypertrophic obstructive cardiomyopathy: A possible mechanism. *Circulation* 1998 November: 98(II): pp 144-150.

Li R-K, Jia Z-Q, Weisel RD, Merante F, Mickle DAG: Smooth muscle cell transplantation into myocardial scar tissue improves heart function. *Journal of Molecular Cellular Cardiology* 1999 February: 31: pp 513-522.

Liu M, Shahram M, Jedlovsky T, Van Wert R, Zhang J, Li R-K, Yan J: Bio-stretch: A computerized cell strain apparatus for three dimensional organotypic cultures. *In Vitro Cellular and Developmental Biology* 1999 February: 35: pp 87-93.

Maki BE, McIlroy WE: The control of foot placement during compensatory stepping reactions: Does speed of response take precedence over stability? *IEEE Transactions on Rehabilitation Engineering* 1999 March: 7: pp 80-90.

Maki BE, Perry SD, McIlroy WE: Efficacy of hand rails in preventing stairway falls: A new experimental approach. *Safety Science* 1998 September: 28: pp 189-206.

Maki BE, Perry SD, Norrie RG, McIlroy WE: Effect of facilitation of sensation from plantar foot-surface boundaries on postural stabilization in young and older adults. *Journal of Gerontology* 1999 June: 54A: pp M281-M287.

McIlroy WE, Bent LR, Potvin JR, Brooke JD, Maki BE: Anticipatory balance control precedes withdrawal response to noxious stimulation. *Neuroscience Letters* 1999 June: 267: pp 197-200.

Merante F, Mickle DAG, Weisel RD, Li R-K, Tumiati LC, Rao V, Williams WG, Robinson BH: Myocardial aerobic metabolism is impaired in a cell culture model of cyanotic heart disease. *American Journal of Physiology* 1998 November: 275: pp 1673-1681.

Mihailidis A, Schuller R, Tierney MC, Fernie GR: Effective cuing techniques for prompting patients with dementia during a washroom task. Proceedings, Annual Conference of the Rehabilitation Engineering Society of North America, Minneapolis 1998 July.

Mingo N, Cottrell G, Mendonca A, Gombos Z, Eubanks JH, Burnham WM: Amygdala-kindled and electroconvulsive seizures alter hippocampal expression of the m1 and m3 muscarinic cholinergic receptor genes. Brain Research 1998 November: 810: pp 9-15.

Radhakrishnan V, Tsoukatos J, Davis KD, Tasker RR, Lozano AM, Dostrovsky JO: A comparison of the burst activity of lateral thalamic neurons in chronic pain and non-pain patients. Pain 1999 April: 80: pp 567-575.

Rao V, Merante F, Weisel RD, Shirai T, Cohen G, Borger MA, Li R-K, Mickle DAG: Insulin stimulates myocardial pyruvate dehydrogenase by a protein kinase C-@ dependent mechanism. Journal of Thoracic and Cardiovascular Surgery 1998 October: 116: pp 485-494.

Rezai AR, Lozano AM, Crawley AP, Joy MLG, Davis KD, Kwan CL, Dostrovsky JO, Tasker RR, Mikulis DJ: Thalamic stimulation and functional magnetic resonance imaging: Localization of cortical and subcortical activation with implanted electrodes. Journal of Neurosurgery 1999 March: 90: pp 583-590.

Schumacher PA, Eubanks JH, Fehlings MG: Increased calpain I mediated proteolysis, and preferential loss of dephosphorylated NF200, following traumatic spinal cord injury. Neuroscience 1999 April: 91: pp 733-744.

Wigle D, Ho W, Lo D, Francis J, Eubanks JH, Wallace MC: Altered expression levels of SEF-2 and p112 in the rat hippocampus after transient cerebral ischemia: Identification by mRNA differential display. Journal of Cerebral Blood Flow and Metabolism 1999 April: 19: pp 435-442.

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* 1999 June; 832: pp 31-39.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Davis KD: Stereotactic, Functional and Restorative Neurosurgery: Advances and Prospectives for the New Millennium, New York, New York, June 1999. Pain: Functional MRI.

Davis KD: Queen's University, Kingston, Ontario, October 1998. Old and new approaches to imaging pain with functional MRI.

Hamstra SJ: Association for Surgical Education, Boston, Massachusetts, April 1999. A successful surgical skills program: Let's get started.

Hamstra SJ: Acoustical Society of America, Norfolk, Virginia, October 1998. Gap detection thresholds as a function of marker duration in young and old listeners.

Li R-K: McMaster University, Hamilton, Ontario, April 1999. Cell transplantation to repair a broken heart.

Li R-K: American Heart Association, Dallas, Texas, November 1998. Surgical angiogenesis with cell transplantation.

Li R-K: European Tissue Culture Society, Hanover, Germany, October 1998. Cell transplantation to prevent heart failure-mechanism and clinical application.

Li R-K: University of Calgary, Calgary, Alberta, September 1998. Cell transplantation to repair a broken heart.

Li R-K: National Institutes of Health, Columbia, Maryland, August 1998. Cell transplantation: Future therapy for cardiovascular disease.

Wittnich C: Heart and Stroke Foundation, Meaford, Ontario, May 1999.
Heart smart women.

Wittnich C: Heart and Stroke Foundation, Owen Sound, Ontario,
November 1998. Women and heart disease in 1998: Should you be
concerned?

Wittnich C: Xerox International Women's Conference, Toronto, Ontario,
October 1998. Surviving the corporate world: The ultimate balancing act.

RESEARCH AND INVESTIGATIONS

Senior Investigator's Name Appears in Italics

Acute skeletal muscle ischemic pre-conditioning: Mechanism and clinical
application. *Forrest CR, Pang CY:* Medical Research Council of Canada
(\$303,234 1993 - 1998).

Assistive devices to aid mobility. *Fernie GR:* Ministry of Health (\$196,000
1998 - 1999).

Balance. *Maki BE, Fernie GR:* Medical Research Council of Canada
(\$340,000 1999 - 2004).

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).

Cell volume-dependent signalling mechanisms. *Kapus A:* Medical
Research Council of Canada (\$165,162 1998 - 2000).

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).

Effects of bisphosphonates on human bone implanted in SCID mice. *Boynton E, Sandhu J, Aubin J*: Merck Frost (\$80,000 1997 - 1998).

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 S, Hutchison C, Murnaghan J, Regehr G, Reznick R*: Physicians Services Incorporated Foundation (\$82,555 1998 - 2000).

Human studies of pain and temperature sensation. *Davis KD, Mikulis DJ, Wood ML*: Medical Research Council of Canada (\$251,314 1998 - 2001).

Hypertonicity-induced signalling in neutrophils: Cellular mechanisms underlying a beneficial immunomodulatory effect. *Kapus A*: Connaught Foundation (\$29,500 1998 - 2000).

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).

Improvement of failing heart function by transplanting cardiomyocytes into myocardial scar tissue. *Li R-K*: Medical Research Council of Canada (\$213,000 1996 - 1999).

Inhibition of GvHD and GvL by gamma/delta TCR+ cells. *Gorzynski RM*: Cancer Research Society (\$48,000 1997 - 1998).

Investigation of the immunologic effects of donor-specific blood transfusion via the portal vein in cadaveric kidney allograft recipients. *Cattral M, Gorzynski RM*: Physicians Services Incorporated Foundation (\$120,000 1997 - 1999).

Ischemic pre-conditioning of skeletal muscle against infarction. *Forrest CR, Pang CY*: Medical Research Council of Canada (\$183,234 1995 - 1998).

Kindling induced changes in gene expression: A study involving differential display. *Burnham WM, Eubanks JH*: Medical Research Council of Canada (\$165,774 1996 - 1999).

Microelectrode-guided pallidotomy for Parkinsonism: Optimization of lesion size and location. *Hutchison WD, Lozano AM, Dostrovsky JO, Lang AE, Tasker RR*: Parkinson Foundation of Canada (\$37,404 1996 - 1998).

Molecular analysis of NMDA receptor complexes in the aged brain. *Eubanks JH, Zhang L*: Alzheimer Society of Canada (\$96,071 1999).

Molecular evaluation of gene expression in epilepsy. *Burnham WM, Eubanks JH*: Bloorview Epilepsy Foundation (\$75,000 1997 - 1999).

Multidirectional compensatory stepping in the young and elderly. *Maki BE, Fernie GR, Black SE*: Medical Research Council of Canada (\$166,966 1996 - 1999).

Neuronal contribution to delayed onset muscle soreness (DOMS). *Theriault E*: Natural Sciences and Engineering Research Council (\$60,000 1996 - 2000).

Particle induced bone osteolysis. *Sandhu J*: Pfizer Incorporated (\$50,000 1997 - 1998).

Physical force and fetal lung growth: Intracellular signal transduction. *Liu M*: James H. Cummings Foundation Incorporated (\$38,000 1997 - 1998).

Production of human monoclonal antibodies neutralizing human pro-inflammatory cytokines in SCID mouse model. *Hozumi N, Sandhu JS*: Natural Sciences and Engineering Research Council (\$89,883 1997 - 1998).

Regulation of cutaneous circulation. *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 AMPA/kainate receptors in traumatic CNS white matter injury. *Fehlings MG, Carlen PL, Eubanks JH, Zhang L, Gurd JW, Baker A:* Medical Research Council of Canada (\$650,000 1999).

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 (\$19,800 1998 - 2001).

Signal initiation of mechanical strain-induced fetal lung cell proliferation. *Liu M:* Medical Research Council of Canada (\$150,000 1995 - 1998).

Signal transduction in cell volume regulation. *Kapus A:* Dean's Fund (\$10,000 1997 - 1999).

Stable transfection of macrophages and alveolar epithelial cells. *Liu M:* Ontario Thoracic Society (\$5,350 1997 - 1998).

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 - 1998).

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 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 pathogenesis of inflammatory joint pain: Spinal cord mechanisms. *Theriault E:* Arthritis Society (\$148,140 1996 - 1999).

The relevance of muscarinic receptors in global ischemia induced delayed neuronal death. *Eubanks JH, Zhang L*: Heart and Stroke Foundation (\$102,535 1999).

The response of the newborn heart to chronic oxygen stress. *Wittnich C*: Heart and Stroke Foundation (\$159,391 1997 - 1999).

The role of a novel methyl DNA binding protein in ischemia injury. *Eubanks JH*: Heart and Stroke Foundation (\$207,802 1999).

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).

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

The role of the cingulate cortex in pain perception: A functional magnetic resonance imaging study. *Davis KD*: Whitehall Foundation (\$118,000 1996 - 1999).

Thromboresistance of acellular matrix vascular prosthesis. *Wilson G, Courtman DW*: Heart and Stroke Foundation (\$63,008 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).

Visual stimulus generator for shape discrimination in stereopsis. *Hamstra SJ*: Natural Sciences and Engineering Research Council (\$17,742 1998 - 1999).

HONOURS RECEIVED

Maki BE: Senior Scientist Career Award, Medical Research Council of Canada, February 1999.

EMERGENCY MEDICINE

- Dr. P. Arnold — Instructor**
(University Health Network)
- Dr. J.C. Fallis - Assistant Professor**
(The Hospital for Sick Children)
- 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.W. Saslove - Instructor**
(St. Michael's Hospital)
- Dr. D. Williams - Assistant Professor**
(Sunnybrook and Women's College Health Sciences Centre)

PUBLICATIONS

- Boulanger BR, Kirkpatrick A, McLellan BA, Brenneman FD:**
Indeterminate abdominal sonogram in multi-system blunt trauma. *Journal of Trauma* 1998 July: 45(1): pp 52-56.
- McLellan BA:** Early experience with simulated trauma resuscitation. *Canadian Journal of Surgery* 1999 June: 42(3): pp 36-37.

INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

- McLellan BA:** Major Case Management Course, Sault Ste Marie, Ontario, June 1999. The role of the coroner.
- McLellan BA:** Arts and Letters Club, Toronto, Ontario, June 1999. The Ontario coroner's system.

McLellan BA: Risk Watch Conference, Gravenhurst, Ontario, April 1999. Preventing traumatic injury.

McLellan BA: Major Case Management Course, Toronto, Ontario, March 1999. Role of the coroner in major case management.

McLellan BA: Ontario Provincial Police, Orillia, Ontario, February 1999. Role of the coroner in traffic fatalities.

McLellan BA: Major Case Management Course, Oshawa, Ontario, February 1999. The role of the coroner in major case management.

McLellan BA: Major Case Management Course, Sudbury, Ontario, February 1999. The role of the coroner in major case management.

McLellan BA: Criminal Investigation Course, Ontario Provincial Police Headquarters, Orillia, Ontario, February 1999. The role of the coroner in major case management.

McLellan BA: Major Case Management Course, North Bay, Ontario, January 1999. The role of the coroner in major case management.

McLellan BA: Inquest Coroner's Course, office of the Coroner, Toronto, Ontario, January 1999. Receiving the inquest verdict: Preparing the verdict explanation.

McLellan BA: Queen Elizabeth II Health Science Centre, Halifax, Nova Scotia, November 1998. Workshop: Ultrasound.

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, Trade and Tourism (\$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.D.H. Campbell - Assistant Professor (*Medicine*)
Dr. J. Carson - (*Family and Community Medicine*)
Dr. A. Damyanovich - Assistant Professor (*Medical Imaging*)
Dr. J.E. Davies - Associate Professor (*Dentistry*)
Dr. A. Davis - Assistant Professor (*Physical Therapy*)
Dr. W. Demajo - Assistant Professor (*Anesthesia*)
Dr. M. Dennis - Associate Professor (*Public Health Sciences*)
Dr. D. DePetrillo - Professor (*Obstetrics and Gynaecology*)
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. Grynepas - Associate Professor
(*Laboratory Medicine and Pathobiology*)
Dr. P.J. Gullane - Professor (*Otolaryngology*)
Dr. B. Harvey - Assistant Professor (*Public Health Sciences*)
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 Science)

Dr. K.P.H. Pritzker - Professor
(Laboratory Medicine and Pathobiology)

Dr. G. Regehr - Assistant Professor (Psychiatry)

Dr. P. Ritvo - (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. Stewart - Professor (Psychiatry)

Dr. K. terBrugge - Professor (Medical Imaging)

Dr. R. Willinsky - Associate Professor (Medical Imaging)

Dr. G.J. Wilson - Professor
(Laboratory Medicine and Pathobiology)

Dr. T. Wu - Professor
(Laboratory Medicine and Pathobiology)

PUBLICATIONS

Alter D, Basinski ASH, Naylor CD: Survey of provider experiences and perceptions of preferential access to cardiovascular care in Ontario, Canada. *Annals of Internal Medicine* 1998 October: 129: pp 567-572.

Anastakis D, Regehr G, Reznick R, Brown M, Cusimano M, Hutchison C, Murnaghan J: Transfer of technical skills training from the bench model to the human model. *American Journal of Surgery* 1999 February: 177(2): pp 167-170.

Ariel AP, Furlott HG, Chapman KR, Slutsky AS, Webster P, Zamel N, Tarlo SM: Effect of high dose inhaled acetic acid on airway responsiveness in Fisher rats. *Canadian Respiratory Journal* 1998 October: 5(5): pp 349-354.

Baker AJ: Management of the severely head injured patient. *Canadian Journal of Anaesthesia* 1999 May: 46(5): pp R35-R40.

Bapat BV, Madlensky L, Temple LK, Hiruki T, Redston M, Baron DL, Xia L, Marcus VA, Soravia C, Mitri A, Shen W, Gryfe R, Berk T, Chodirker BN, Cohen Z, Gallinger S: Family history characteristics, tumor microsatellite instability and germline MSH2 and MLH1 mutations in hereditary colorectal cancer. *Human Genetics* 1999 February: 104(2): pp 167-176.

Bapat B, Noorani H, Cohen Z, Berk T, Mitri A, Xia L, Gallie B, Pritzker KPH, Gallinger S, Detsky A: Cost comparison of predictive genetic testing versus clinical screening for familial adenomatous polyposis. *GUT* 1999 May: 44(5): pp 698-703.

Belyavskiy M, Belyavskaya E, Levy GA, Leibowitz JL: Coronavirus MHV-3 induced apoptosis in macrophages. *Virology* 1998 November: 250: pp 41-49.

Belyavskiy M, Levy GA, Leibowitz JL: The pattern of induction of apoptosis during infection with MHV-3 correlates with strain variation in resistance and susceptibility to lethal hepatitis. *Advances in Experimental Medicine and Biology* 1998 September: 440: pp 619-625.

Berk T, Cohen Z, Bapat B, Gallinger S: Negative genetic test results in familial adenomatous polyposis: Clinical screening implications. *Diseases of the Colon and Rectum* 1999 March: 42(3): pp 310-312.

Bigham D, Zhong R, Levy GA, Grant D: Xenotransplantation. *Canadian Journal of Surgery* 1999 February: 42(1): pp 12-16.

Blackley HR, Wunder JS, Davis AM, White LM, Kandel RA, Bell RS: Treatment of giant cell tumors of long bones with curettage and bone grafting. *Journal of Bone and Joint Surgery* 1999 June: 81A(6): pp 811-820.

Bushinsky DA, Bashir MA, Riordon D, Nakagawa Y, Coe FL, Grynbas MD: Increased dietary oxalate does not increase urinary calcium oxalate supersaturation nor alter stone composition in genetic hypercalciuric rats. *Kidney International* 1999 February: 55(2): pp 602-612.

Cameron C, Naylor CD: No impact from active dissemination of the Ottawa ankle rules: Further evidence of the need for local implementation. *Canadian Medical Association Journal* 1999 April: 160(8): pp 1165-1168.

Carcao MD, Taylor GP, Greenberg ML, Bernstein ML, Champagne M, Hershon L, Baruchel S: Renal cell carcinoma in children: A different disorder from its adult counterpart. *Medical and Pediatric Oncology* 1998 September: 31: pp 153-158.

Cassivi SD, Liu M, Boehler A, Tanswell AK, Slutsky AS, Keshavjee S, Todd TRJ: Transgene expression after adenovirus: Mediated retransfection of rat lungs is increased and prolonged by transplant immunosuppression. *Journal of Thoracic and Cardiovascular Surgery* 1999 January: 117(1): pp 1-8.

Cattral MS, Hemming AW, Greig PD, Roswell C, Chari R, Cole E, Donat D, Wright E, Levy GA: Outcome of kidney transplant alone versus synchronous pancreas-kidney transplantation in type I diabetics. *Transplantation Proceedings* 1998 August: 30(5): pp 1938-1939.

Cattral MS, Hemming AW, Greig PD, Roswell C, Chari R, Wright E, Donat D, Cole E, Levy GA: Low incidence of rejection after synchronous pancreas-kidney transplantation with neoral. *Transplantation Proceedings* 1998 August: 30(5): pp 1946.

Cattral MS, Hemming AW, Wanless IR, Al Ashgar H, Krajden M, Lilly L, Greig PD, Levy GA: Outcome of a long-term ribavirin therapy for recurrent hepatitis C after liver transplantation. *Transplantation* 1999 May: 67(9): pp 1277-1280.

Cauch-Dudek A, Stewart DE, Abbey S, Heathcote J: Fatigue in primary biliary cirrhosis. *GUT* 1998 October: 43(5): pp 705-710.

Chachra D, Turner CH, Dunipace AJ, Grynepas MD: The effects of fluoride treatment on bone mineral in rabbits. *Calcified Tissue International* 1999 April: 64(4): pp 345-351.

Chan-Yeung M, McClean PA, Sandell PR, Slutsky AS, Zamel N: Sensitization to cat without exposure to cats. *Clinical and Experimental Allergy* 1999 June: 29(6): pp 762-765.

Cohen EA, Oh P, Young WI, Slaughter P, Naylor CD: Trends in the clinical and economic outcomes of coronary angioplasty from 1992 to 1995: A population-based analysis. *American Heart Journal* 1999 June: 136(6): pp 1012-1018.

Cohen G, Feder-Elituv R, Iazetta J, Bunting P, Mallidi H, Bozinovski J, Deemar C, Christakis GT, Cohen EA, Wong BI, McLean RD, Myers M, Morgan CD, Mazer CD, Smith TS, Goldman BS, Naylor CD, Froles SE: Phase 2 studies of adenosine cardioplegia. *Circulation* 1998 November: 98(II): pp 25-33.

Courtman DW, Cho A, Langille L, Wilson GJ: External banding induces medial atrophy and apoptosis but does not limit intimal lesion formation in the rabbit abdominal aorta. *American Journal of Pathology* 1998 December: 153(6): pp 1723-1729.

Curran AJ, Gullane PJ, Bance ML, Donald PJ: Temporal bone resection. In: *Surgery of the Skull Base* (Donald PJ, ed). Lippincott-Raven Publishers, Philadelphia 1998: pp 377-407.

Curran AJ, Gullane PJ, Waldron J, Irish J, Brown D, O'Sullivan B, Cummings B: Surgical salvage after failed radiation for paranasal sinus malignancy. *Laryngoscope* 1998 November: 108: pp 1618-1622.

Curran AJ, Irish JD, Gullane PJ: Cancer of the larynx, paranasal sinuses and temporal bone. In: *Essential Otolaryngology: Head and Neck Surgery*, Seventh Edition (Lee KJ, ed). Appleton and Lange, Chicago 1998: pp 549-572.

Davis AM, Bell RS, Badley EM, Yoshida K, Williams JI: Evaluating functional outcome in lower extremity sarcoma patients. *Clinical Orthopaedics and Related Research* 1999 January: 358: pp 90-100.

Davis AM, Devlin M, Griffin AM, Wunder JS, Bell RS: Functional outcome in amputation versus limb sparing of lower extremity sarcoma patients: A matched case control study. *Archives of Physical Medicine and Rehabilitation* 1999 June; 80: pp 615-618.

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INVITED VISITS TO OTHER HOSPITALS/UNIVERSITIES

Greenberg M: McMaster University, Hamilton, Ontario, January 1999. Medulloblastoma: From molecular events to quality of life.

Greenberg M: Conference of Candlelighters Childhood Cancer Foundation Canada, Montreal, Quebec, July 1998. Sequellae of childhood cancer.

Grynbas MD: International Course on Osteoporosis: Fractures, Back Pain and Disability Management, Vienna, Austria, June 1999. The effects of trace elements on bone mineralization, architecture and mechanical properties.

Gullane PJ: North American Skull Base Society, Chicago, Illinois, May 1999. Panelist: Craniofacial resection: Outcome measures and long-term results.

Gullane PJ: Curts Visiting Professor, Dartmouth-Hitchcock Medical Center, Lebanon, New Hampshire, May 1999. Analysis and management of skull base neoplasms.

Gullane PJ: University of Western Ontario, London, Ontario, May 1999. (1) Subglottic resection with primary thyro-tracheal anastomosis: Including synchronous laryngotracheal reconstruction, (2) Co-adjudicator.

Gullane PJ: American Head and Neck Society, Palm Desert, California, April 1999. Restoration of facial contour with sternocleidomastoid myogenous flap following parotidectomy.

Gullane PJ: Joint Training Council, Houston, Texas, February 1999. Specialist site visitor for approval of advanced training in head and neck oncologic surgery.

Gullane PJ: Visiting Professor, Central Pennsylvania Society for Otorhinolaryngologists, Hershey, Pennsylvania, February 1999. (1) Subglottic resection with primary thyro-tracheal anastomosis: Including synchronous laryngotracheal reconstruction, (2) Skull base neoplasms: Analysis and management.

Gullane PJ: Triological Society, Providence, Rhode Island, January 1999. Panelist: Unusual head and neck tumors.

Gullane PJ: Ethicon Genetronics, New York, New York, December 1998. Electroporation of chemotherapy.

Gullane PJ: American Academy of Otolaryngology/Head and Neck Surgery Foundation, San Antonio, Texas, September 1998. (1) Lip reconstruction, (2) Panelist: Adult laryngotracheal stenosis, (3) Parotid gland neoplasm: Extent of resection and facial reconstruction.

Gullane PJ: Bionix Laboratories, Atlanta, Georgia, August 1998. (1) Invited guest, (2) Panelist: Role of bioabsorbable plates.

Harvey B: American College of Preventive Medicine, Washington, D.C., August 1998. A review of chronic (non-communicable) diseases.

Kucharczyk W: World Federation of International Therapeutic Neuroradiology, Algarve, Portugal, June 1999. Interventional MRI: Current status and future applications.

Kucharczyk W: CIP Steering Committee, Leipzig, Germany, May 1999. Interventional procedures on a vertical 0.2 Tesla MRI system.

Kucharczyk W: International Society for Magnetic Resonance in Medicine, Philadelphia, Pennsylvania, May 1999. Basic MRI physics.

Kucharczyk W: American Academy of Neurology, Toronto, Ontario, April 1999. Imaging of sellar/parasellar lesions.

Kucharczyk W: International MRI Symposium, Garmisch, Germany, January 1999. (1) MRI-guided endoscopic pituitary surgery, (2) MRI of the pituitary gland and parasellar region.

Kucharczyk W: Radiological Society of North America, Chicago, Illinois, December 1998. Basic MRI physics.

Kucharczyk W: Postgraduate Course, Rush-Presbyterian/St-Luke's Medical Center, Chicago, Illinois, October 1998. (1) MR-guided interventional neuroradiology, (2) Imaging the pituitary gland.

Kucharczyk W: CT and MRI: State of the Art, Hamilton, Bermuda, October 1998. (1) Basics of MRI image formation, (2) Brain tumors, (3) Demyelination, (4) Hemorrhagic lesions of the brain.

Levy GA: International Congress of the European Society for Organ Transplantation, London, England, June 1999. The use of neoral in transplantation: Role of pharmacokinetics.

Levy GA: Ranney Lecturer, Etobicoke Hospital, Toronto, Ontario, June 1999. Pig liver transplants: Babe goes medical.

Milner M: American National Standards Institute/International Standards Organization, Washington, D.C., May 1999. (1) Panel moderator, (2) Improving the quality of life, (3) Medical devices, nutrition and pharmaceuticals, (4) Meeting the needs of aging populations: Enhancing the quality of life through standards.

Milner M: Central and Eastern European Conference, International Society for Prosthetics and Orthotics, Portorose, Slovenia, September 1998. Powered upper extremity prosthetics and assistive technology developments at the Bloorview MacMillan Centre.

Milner M: Jockey Club Rehabilitation Engineering Centre/Hong Kong Polytechnic University, Hong Kong, China, August 1998. Technology transfer issues.

Milner M: International Society for Prosthetics and Orthotics, Amsterdam, The Netherlands, July 1998. Future directions on below elbow prostheses: Perspectives from the Bloorview MacMillan Centre.

Naylor CD: Hong Kong Hospital Authority, Hong Kong, China, April 1999. (1) Needs-based cardiovascular service planning in Ontario, (2) Trouble in paradise: Restructuring health care in Ontario.

Naylor CD: Distinguished Leaders in Medicine Lecturer, Dalhousie University, Halifax, Nova Scotia, December 1998. What is appropriate care?

Naylor CD: Wilbert Keon Lecturer, Medical Research Council of Canada/University of Ottawa, Ottawa, Ontario, December 1998. Coronary surgery in context: Some non-random reflections.

Naylor CD: Ontario Hospital Association/Change Foundation, Toronto, Ontario, November 1998. Evidence-based medicine and health care in 2010.

Naylor CD: Health Transition Fund Wait Lists Development Project, Calgary, Alberta, November 1998. (1) Workshop: Session I: Tools for prioritization: What can we learn? Ontario experience with cardiac and joint replacement procedures, (2) Workshop: Session II: Strategic implementation issues: Ontario cardiac care network.

Naylor CD: Surgical Outcomes Research Retreat, McMaster University, Oakville, Ontario, November 1998. (1) Opportunities and pitfalls in surgical outcomes research, (2) Panel: Report cards for hospitals and surgeons, (3) Surviving amidst scarcity: Informal reflections on funding clinical and health services research.

Naylor CD: Commonwealth Fund International Symposium on Health Care Policy, Washington, D.C., October 1998. Publicly-funded health care in Canada: The troubled and incomplete transition.

Naylor CD: Canadian Cardiovascular Society, Ottawa, Ontario, October 1998. Making difficult choices in a Canadian context.

Pritzker KPH: University of Tokyo, Tokyo, Japan, March 1999. Cartilage repair and regeneration: Recent advances.

Pritzker KPH: Gunma University, Maebashi, Japan, March 1999. Pathogenesis of osteoarthritis: New perspectives.

Pritzker KPH: Osteoarthritis Research Society International, Florence, Italy, October 1998. Histopathological grading of osteoarthritis.

Pritzker KPH: Chiron Technologies Incorporated, Emeryville, California, October 1998. rhIGF-1 effects on articular cartilage histology.

Regehr G: University of California San Francisco, San Francisco, California, September 1998. (1) A structured model for effective feedback, (2) Formalizing the testing and training of technical skills: Five years of research.

Slutsky AS: International Congress of the Israel Society of Anesthesiologists, Haifa, Israel, June 1999. (1) Clinical forum: ICU rounds, (2) Mechanical ventilation: Pro and con discussion, (3) Ventilator-induced lung injury.

Slutsky AS: Linzer Intensiv-Medizinisches Symposium, Berlin, Germany, June 1999. Ventilator-associated lung injury in ARDS.

Slutsky AS: International Intensive Care Symposium, Istanbul, Turkey, May 1999. (1) Ventilation-associated lung injury: A systemic disease?, (2) Mechanical ventilation as a cause of multi-system organ failure.

Slutsky AS: International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium, March 1999. (1) Asthma mortality: Why does it occur?, (2) Is high frequency ventilation dead? (3) Moderator debate: Least PEEP is the worst PEEP, (4) Moderator: The lung pressure/volume curve in clinical practice, (5) Ventilatory-induced lung injury: A summary of clinical trials, (6) Mechanical ventilation as a cause of multi-system organ failure.

Slutsky AS: Hotel Andalucia Plaza, Marabella, Spain, October 1998. Mechanical ventilation for experts.

Slutsky AS: Royal College of Physicians and Surgeons of Canada, Toronto, Ontario, September 1998. Asthma therapy from chicken soup to genetics: Future implications.

Slutsky AS: European Society of Intensive Care Medicine, Stockholm, Sweden, September 1998. (1) Ventilator-induced lung injury, (2) Pulmonary and systemic effects.

Slutsky AS: Cleveland Clinic Foundation, Cleveland, Ohio, August 1998. Mechanical ventilation: The good, the bad, and the ugly.

Slutsky AS: University of Rochester, Rochester, New York, August 1998. Thomas Iberti Memorial Lecture: Mechanical ventilation: A cause of multiple system organ failure.

Slutsky AS: El mundo de la genomica: Aplicaciones medicas e implicaciones sociales, Santander, Spain, August 1998. (1) From Napoleon to Toronto, (2) The search for asthma genes.

Stewart DE: LCDC Workshop, Ottawa, Ontario, June 1999. What are the priorities in women's health surveillance?

Stewart DE: Canadian Breast Cancer Research Institute, Toronto, Ontario, June 1999. Voices of women breast cancer survivors: Reasons for hope.

Stewart DE: Congress of Women's Health, Hilton Head, South Carolina, June 1999. Stress and women physicians.

Stewart DE: Expert Workshop on Violence, Center for Disease Control, Atlanta, Georgia, June 1999. Field trials of the alpha project.

Stewart DE: American Psychiatric Association, Washington, D.C., May 1999. Menopause update.

Stewart DE: Corine Boyer Forum, Toronto, Ontario, May 1999. Information needs and decisional preferences of women with ovarian cancer.

Stewart DE: Tulane University School of Medicine, New Orleans, Louisiana, April 1999. Women and ischemic heart disease.

Stewart DE: New York State University at Buffalo, Buffalo, New York, April 1999. Women and cardiovascular disease.

Stewart DE: Mental Health Conference, University of Illinois, Chicago, Illinois, April 1999. Psychopharmacology and primary care for women.

Stewart DE: World Psychiatric Association, Granada, Spain, March 1999. Reproductive issues in the community care of women with schizophrenia.

Stewart DE: Mental Health Conference, University of Michigan, Ann Arbor, Michigan, March 1999. Gender differences in the treatment of depression.

Stewart DE: Dalhousie University, Halifax, Nova Scotia, December 1998. Women's health research.

Stewart DE: Heinz Lehmann Lecturer, McGill University, Montreal, Quebec, November 1998. The role of psychiatry in women's health research.

Stewart DE: Canadian Medical Association, Toronto, Ontario, November 1998. Leadership opportunities for women.

Stewart DE: Society for the Advancement of Women's Health Research, Washington, D.C., November 1998. Gender based biology and women's mental health.

Stewart DE: World Health Organization/World Psychiatric Association, Guadalajara, Mexico, October 1998. Women's mental health priorities.

Stewart DE: Federal Drug Association, Washington, D.C., October 1998. The relationship between depression and premenstrual dysphoric disorder.

Stewart DE: World Federation of Mental Health, London, England, October 1998. (1) International perspectives on women's health, (2) Workshop leader.

Stewart DE: Distinguished Member Lecturer, Canadian Psychiatric Association, Halifax, Nova Scotia, September 1998. What do women really want?

Stewart DE: World Health Organization/World Psychiatric Association, Johannesburg, South Africa, September 1998. (1) Women's mental health, (2) Psychotropic drugs in pregnancy, (3) Treating depression in childbearing women.

Stewart DE: European Cardiology Conference, Vienna, Austria, August 1998. Women, depression and heart disease.

Stewart DE: St. Paul Hospital, Vancouver, British Columbia, August 1998. Broken hearts: Gender, depression and ischemic heart disease.

Stewart DE: University of British Columbia, Vancouver, British Columbia, August 1998. Broken hearts.

terBrugge KG: Visiting Professor, Xian, China, July 1998. (1) Brain AVM, (2) Dural AVM, (3) Spinal AVM, (4) Head and neck vascular disorders, (5) Acute CVA.

terBrugge KG: Singapore Radiological Society, Singapore, Malaysia, July 1998. (1) Vascular diseases of the brain, (2) Vascular lesions of the head and neck.

terBrugge KG: European Society of Neuroradiology, Lisbon, Portugal, September 1998. (1) Angioarchitecture of brain AVM, (2) Intracranial aneurysms.

terBrugge KG: Radiological Society of Peru, Lima, Peru, November 1998. (1) Endovascular treatment of acute stroke, aneurysm, AVM, head and neck lesions, (2) Vascular anatomy of the spine, (3) Future of interventional neuroradiology.

terBrugge KG: ABC/WIN Course, Val d'Isere, France, January 1999. Dural AV fistula: Natural history, classification and treatment.

terBrugge KG: ASITN/American Association of Neurological Surgeons, Nashville, Tennessee, January 1999. Management of aneurysms in the pediatric age group.

terBrugge KG: American Society of Neurological Radiologists, San Diego, California, May 1999. Role of 3D-DSC.

Willinsky R: Canadian Congress of Neurological Sciences, Edmonton, Alberta, June 1999. Debate: Management of a large para-ophthalmic aneurysm.

Willinsky R: Harvard Medical School, Boston, Massachusetts, June 1999. (1) Vessel artery dissection and pseudoaneurysm: Endovascular approaches, (2) Small AVM's role of embolization.

Willinsky R: American Association of Neurological Surgeons/Canadian Neurosurgery Society/ASITN, Nashville, Tennessee, February 1999. Pediatric brain arteriovenous malformations: Management.

Willinsky R: Eastern Neuroradiological Society, Baltimore, Maryland, August 1998. Management of intracranial aneurysms: Endovascular versus surgical.

Wilson GJ: Vascular Biology Group Seminar Series, McMaster University, Hamilton, Ontario, December 1998. Acellular matrix technology for cardiovascular bioprostheses.

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 phase II, open-label, multicentre study of SR29142 as a uricolytic therapy for the prophylaxis and treatment of hyperuricemia in patients with leukemias or lymphomas. *Greenberg MI*, Lau R, Weitzman S, Chan H, Malkin D, Grant R, Freedman M, Saunders EF, Doyle J: Sanofi Canada Incorporated (\$27,000 1996 - 1998).

A psycho educational intervention for head and neck cancer patients. *Gullane P*: National Cancer Institute of Canada (\$55,515 1996 - 1998).

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 (\$160,000 1998 - 1999).

Alpha care: A national educational research and dissemination project. *Midmer D, Wilson L, Biringner 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, Biringner A, Sedden 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).

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, Gorczynski RM, Issekutz T, Paul L, Phillips MJ, Rotstein OD, Marsden P*: Medical Research Council of Canada (\$2,757,620 1995 - 2000).

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 NL, Bapat B*: National Institutes of Health (\$2,390,570 1999 - 2001).

Chemical processing of acellular matrix vascular grafts for improved biocompatibility. *Wilson GJ*: Ontario Centre for Co-operative Research (\$61,000 1995 - 1998).

Childhood cancer survivor study. *Greenberg ML*, Robison L: National Institutes of Health (\$267,535 1993 - 1999).

Clinical trial of raloxifen use in the heart (RUTH). *Cheung A, Stewart DE, Liu P, Abramson B*: Eli Lilly (\$500,000 1998 - 2003).

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).

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).

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 a health related quality of life for nausea and vomiting in pregnancy. *Magee L, Stewart D, Koren G, Guyatt G*: Physicians Services Incorporated Foundation (\$36,812 1997 - 1998).

Development of children's powered upper extremity prosthetics. *Milner MM, Naumann S*: Variety Village (\$258,000 1998 - 1999).

Do third generation bisphosphonates alter the quality or quantity of bone in animal models of osteoporosis? *Gryn timer MD, Lee M, Renlund R, Pritzker KPH, Green J, Muller K, Mertz B*: Medical Research Council of Canada (\$47,238 1995 - 1998).

Do third generation bisphosphonates alter the quality or quantity of bone in animal models of osteoporosis? *Gryn timer MD, Lee M, Renlund R, Pritzker KPH, Green J, Muller K, Mertz B*: Ciba-Geigy (\$161,652 1995 - 1998).

Effects of aryl hydrocarbone receptor ligands on osteoporosis and reproductive function. *Casper R, Grynepas 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, Grynepas MD*: Canadian Space Agency (\$93,760 1997 - 1999).

Epidermal growth factor: Receptor and ligand interaction: The use of organide 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).

Estimate of frequency of hereditary non-polyposis coli (HNPCC) in Southern Ontario by molecular genetic analyses. *Bapat BV, Gallinger SD, Holowaty E, Redston M, McLeod R*: National Cancer Institute of Canada (\$381,840 1995 - 1998).

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).

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).

Fertility drugs and ovarian cancer study. *Rosen B, Murphy J, Shapiro H, Ritvo P, Irvine J, Stewart D, Robinson G*: Organon Pharmaceutical Company (\$100,000 1996 - 1998).

Field testing of alpha form. *Carroll J*, Midmer D, Reid A, Stewart D, Watson L, Chalmers B: Ministry of Health (\$50,000 1997 - 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, Vacarino F: Canadian Foundation for Innovation (\$9,700,000 1999 - 2004).

Gender differences in coronary intensive care unit patients. *Stewart D*, *Abbey S*, Daly P, Irvine J, Bisailion S, Shnek Z, Bruto V: Heart and Stroke Foundation (\$93,012 1997 - 1999).

Glomerular procoagulant activity in murine lupus nephritis. *Levy GA*, *Cole EH*: Arthritis Society (\$240,000 1995 - 1998).

Glomerular procoagulant activity in murine lupus nephritis. *Cole EH*, *Levy GA*: Kidney Foundation (\$120,000 1998 - 2001).

Identifying barriers and incentives to breast cancer screening behaviours 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 (\$43,500 1998 - 1999).

IL-1 signalling and focal adhesions. *Cruz T*, *Pritzker KPH*, *McCulloch CAG*, *Kandel R*: Medical Research Council of Canada (\$121,302 1995 - 1998).

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).

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 (\$511,877 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 Foundation (\$10,000 1997 - 1999).

Lung injury and repair. *Slutsky AS*: Medical Research Council of Canada (\$476,220 1994 - 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).

Mathematical processing after early hydrocephalus. *Barnes MA*, Dennis M, Hetherington CR: Ontario Mental Health Foundation (\$97,096 1997 - 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).

Needs assessment of women's health issues in the Hispanic community. *Clarke A*, Ashbury F, Stewart D: Health Canada (\$60,500 1997 - 1998).

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).

Pathobiology of the lymphatic circulation. *Johnston MG*: Medical Research Council of Canada (\$214,168 1995 - 1998).

POGO operating grant for centre of comprehensive research in childhood cancer. *Greenberg C*, Barr R, Greenberg M: Ministry of Health (\$600,000 1997 - 2003).

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).

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 1997 - 1999).

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 (\$52,488 1998 - 2000).

Quality of acute myocardial infarction care. *Tu JV, Naylor CD*: Medical Research Council of Canada (\$186,196 1998 - 2000).

Randomized trial of elective neck dissection in patients with T1.T2 oral cavity carcinoma. *Davidson J, Gullane PJ*: National Cancer Institute of Canada (\$750,000 1995 - 1998).

Rural family doctor use of cancer screening. *Stewart DE*: Cancer Care Ontario (\$2,000 1998 - 1999).

Safety and efficacy of high-dose pentaspan versus albumin 1 major reconstructive plastic surgery. *Arellano R, Gan BS, Doyle DJ, Yeo EL, Neligan P, Gullane P, Sandler AN*: Physicians Services Incorporated Foundation (\$100,000 1996 - 1998).

Silicone implant analysis. *Smith D, Baines C, Boynton E, Fornasier V, Peters W, Lugowski S, Semple J*: Dow Corning (\$630,000 1996 - 1999).

Spina bifida: Cognitive and neurobiological variability. *Dennis M, Fletcher JM, Barnes MA, Hannay HJ, Landry SH, Northrup HL*: National Institutes of Health (\$5,675,486 1998 - 2003).

Structure-function analysis of the APC tumor suppressor: Identification of ARM domain interacting genes. *Bapat B*, Hannigan G: Medical Research Council of Canada (\$278,376 1999 - 2002).

The effect of zoledronate on bone quality in the treatment of aseptic loosening of hip arthroplasty. *Grynvas MD*: Novartis (\$400,000 1998 - 2000).

The effect of zoledronate on bone quality in the treatment of aseptic loosening of hip arthroplasty. *Grynvas MD*: Medical Research Council of Canada (\$100,000 1998 - 2000).

The impact of congenital and perinatal hydrocephalus on quality of life: Intelligence neuropsychological function, literacy and numeracy, and psychosocial function in adult survivors. *Dennis M*, Barnes MA, Hetherington CR, Gentili F, Drake JM, Hoffman HJ, Humphreys RJ: Ontario Mental Health Foundation (\$83,038 1996 - 1998).

The impact of instructions on candidate behaviour 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).

Thromboresistance of acellular matrix vascular bioprostheses. *Wilson GJ*, Courtman D: Heart and Stroke Foundation (\$63,008 1998 - 2000).

Ultrasound biomicroscopy of normal and osteoarthritic articular cartilage. *Foster FS*, Pritzker KPH, Bogoch E: Medical Research Council of Canada (\$177,138 1996 - 1999).

HONOURS RECEIVED

Regehr G: Young Educators Award, Association of Canadian Medical Colleges, May 1999.