QUEEN'S UNIVERSITY
DEPARTMENT OF PATHOLOGY

FACULTY OF MEDICINE
ANNUAL REPORT
1998

DR. PAUL MANLEY, M.D. - CHAIRMAN

DEPARTMENT OF PATHOLOGY
1998
ANNUAL REPORT

TABLE OF CONTENTS

(Report written March 1999)

June 1998

Standing: - (From left to right) - Michael Rutherford, John Rossiter, Sherry Taylor, David LeBrun, Karen Harrison, David Piper, Chris Collier, David Hurlbut, Santosh Wasan, Lewis Tomalty, Sandip SenGupta, David Kydd, Iain Young, Nav Gill, Plamen Kossev, Richard Yu and Ronald Grondin (summer student)
Sitting: - Susan Cole, David Lillicrap, David Dexter, Robert Kisilevsky, Paul Manley, Sally Ford, Sam Ludwin, Mike Raymond, Roger Deeley and Jenny Raymond

FACULTY, ADMINISTRATION
AND
LABORATORY MANAGERS AND SUPERVISORS

DEPARTMENT OF PATHOLOGY
FACULTY

1998-99

PROFESSOR AND HEAD	Dr. Paul Manley
PROFESSORS	Dr. A.F. Clark*
	Dr. S. Cole
	Dr. R. Deeley
	Dr. G. Delisle*
	Dr. B. Elliott
	Dr. A.R. Giles (Retired June 30, 1998)
	Dr. J.C. Kennedy*
	Dr. R. Kisilevsky
	Dr. D. Lillicrap
	Dr. S. Ludwin
	Dr. P.G. Young*
ASSOCIATE PROFESSORS	Dr. B. Campling*
	Dr. D. Dexter
	Dr. W.A. Fletcher
	Dr. S. Ford
	Dr. P. Greer
	Dr. M. Khalifa*
	Dr. D. Maurice
	Dr. C. Mueller*
	Dr. L. Mulligan*
	Dr. M. Petkovich*
	Dr. L. Raptis*
	Dr. M. Richardson (Retired June 30, 1998)
	Dr. S. SenGupta
	Dr. L. Shepherd
	Dr. S. Taylor
	Dr. L. Tomalty*
	Dr. S. Wasan
	Dr. I. Young
	Dr. D. Zoutman
ASSISTANT PROFESSORS	Dr. A.S. Boag
	Dr. C. Collier
	Dr. S. Davey*
	Dr. G. Evans*
	Dr. K. Harrison
	Dr. D. Hurlbut

ASSISTANT PROFESSORS
(cont'd)

Dr. D. LeBrun
Dr. D. Lee*
Dr. D. Rapson (0.5 part-time)
Dr. M. Raymond
Dr. J. Rossiter
Dr. C. Rowlands

LECTURER

Dr. J. Raymond

ADJUNCT ACADEMIC GROUP I

Dr. L. Becker
Dr. S. Birse
Dr. A. Duncan
Dr. M. Gaber
Dr. S. Inoue
Mr. L. Kennedy
Dr. D.M. Robertson, Emeritus
Dr. J. Samis
Dr. G. Twemlow

ADMINISTRATION

Laboratory Manager	- Mr. David Piper
Administrative Assistant	- Mrs. Marg McIlroy

LABORATORY MANAGERS AND SUPERVISORS

Anatomic Pathology	- Mr. Dave More
Chemistry	- Mrs. Mary Waugh
Cytogenetics	- Ms. Anne Hanley
Microbiology	- Ms. Linda Fidler
CLEO	- Mr. Dave More

***Cross-Appointed Staff**

LABORATORY MEDICINE
AND
PATHOLOGY

INTRODUCTION & EXECUTIVE SUMMARY

Pathology as a discipline bridges the interface between basic medical science and clinical practice.

Therefore the role of the Queen's Department of Pathology is distinctive at the Medical School; while playing a major role in the educational and research aspects of the school, it functions as both a basic science and a clinical department; and is also responsible for one of the most technically and administratively complex service departments in the affiliated hospitals.

The Department has achieved excellence in many areas of its mandate, by building on a policy of commitment to academic excellence, taking into consideration the unique features offered by the local Queen's and regional environments. Of great importance has been the establishment of a common set of values throughout the Department, in which mutual respect for excellence in all of the various aspects of Departmental work has been achieved among its members, and in which there has been little internal dissension about the need to mutually support the various diverse endeavours of the Department. In these endeavours, the strategic plan of the Department, and its vision are remarkably consonant with the recently articulated Faculty Vision Statement.

The educational aspects of the Department have traditionally been very strong. The Pathology Department is unique in that it offers a complete range of educational facilities, from Undergraduate Medical, Undergraduate Life Sciences and Graduate Studies, to Postgraduate Resident levels. The evolution of teaching to Undergraduate Medical students has progressed from the delivery of traditional courses in General and Special Pathology under the old curriculum, to the integrated teaching of the new curriculum, a process still in progress, but one which has been readily embraced by the Department, which has shown a willingness to take a leadership role in the process. The Undergraduate Life Science programme has progressively expanded at Queen's, and concurrent with this, the enrolment in courses given by the Pathology Department has steadily increased. The Pathology Department is actively pursuing, together with other Basic Science departments, methods of collaborative teaching in this important programme. The Department's Graduate Studies programme has increased dramatically since its inception, with a major increase in a number of Graduate students, including progressively more PhD students, studying and doing research within the Department.

Traditionally, residency training in the Department has been very strong, with 4 programmes accredited by the Royal College of Physicians of Canada being offered. Queen's graduates have had a remarkably high rate of success in examinations in these programmes, and have gone on to take jobs in both the Academic and the Non-University sectors. The General Pathology training programme for years has been considered one of the best of its kind in the country, and the Neuropathology training programme has attracted applicants from around the world, who have then gone on to important academic positions in the country. The Pathology training programme like those all around the country faces tremendous challenges due to the restrictions on positions and entry imposed by the Provincial governments.

Since the 1950's, the Department, starting under the Headship of Dr. Robert More, has developed into an extremely strong academic unit. Although the Department is of relatively small size, in concert with the size of Queen's Medical School and the affiliated hospitals, (see comparatives for some figures) it has achieved a level of academic excellence, far in excess of that expected for its numbers. The Department attracts external funding of approximately $3.2 million annually, in competitive grants, a figure among the highest in the Medical School in absolute terms, and by far the highest on a per FTE basis. (It should be pointed out that this figure covers only those

Faculty members having a Primary appointment in Pathology - those with joint appointments in Pathology whose home department is elsewhere are not included in these statistics). As can be seen by the reference to the comparator medical schools, this is a record which puts the Department at the top rank of departments across Canada. Pathology Department researchers have 4 times within the last 10 years won the University-wide Excellence in Research Award, a record unmatched by any other university department. Research groupings in the Department, in Cancer, Haemostasis, Amyloidosis, Neuroscience and Human Genetics have been well established, with multiple links to researchers in other departments across the university, and internationally.

The service aspects of the Department take place mainly in the affiliated hospitals, Kingston General and Hotel Dieu. There is a complex administrative structure, which has traditionally encompassed 2 separate hospitals. In advance of the restructuring in the city of Kingston, a single Department sited primarily at Kingston General Hospital was developed in 1996. The clinical activities cover a wide range of specialist's and sub-specialist's expertise.

A major enterprise of a great practical and academic importance is the Clinical Laboratories of Eastern Ontario Regional Programme. This has been a concerted initiative over the last 10 years, involving the provision of laboratory services, expertise and increasingly education by the Queen's academic department to the hospitals in the region of South Eastern Ontario. This exercise is a novel one in Ontario with the potential to serve as a model not only for other Academic Pathology Departments across the Province, but for Clinical Departments as well.

The Department is thus fulfilling the mandate of the Dean's Vision Statement of the Medical School, in the Generation, Transmission and Application of knowledge. It has long concentrated on the training of excellent General Pathologists, while at the same time achieving international stature in the provision of selected sub-specialists' services. In the service and education sectors, the Department has served not only the entire local area, but has now embarked on an ambitious regional programme, taking into consideration the unique features of the South Eastern Ontario Health Sciences environment. In the field of research, or knowledge generation, international excellence has been achieved, through the formation of collaborative groups both within and outside the Department.

We have submitted written reports for the Internal Academic Review of the Basic Medical Sciences and the Institutional Self Study of the Faculty of Medicine for the Liaison Committee on Medical Education. For the Internal Academic Review, Pathology decided to join in the grouping of Basic Science Departments. External consultants from Dalhousie and UBC were given two days in December 1997 to review the six Basic Science departments which include Pathology. They concluded that Pathology was "a strong research department" and that "we rank well in Canada as a research department". They suggested a greater emphasis on PhDs within our Graduate Program and a larger number of Postdoctoral Fellows.

The information was compiled and submitted as an Institutional Self Study Report for the LCME and Committee on Accreditation of Canadian Medical Schools.

DEPARTMENT OF PATHOLOGY
VISITING LECTURERS
1998

VISITING LECTURERS
1998

Regulation of Human Apolipoprotein A-1 Gene Expression
Dr. Tom Tam, Department of Biochemistry, Queen's University, January 6, 1998

Two Models of Transcriptional Regulation in Cancer: Expression of the BRCA1 Gene and Phosphorylation of SP1
Dr. Chris Mueller, Department of Biochemistry, Queen's University, January 20, 1998

The Role of Lipoprotein(s) in the Fibrinolytic System
Dr. Marlys Koschinsky, Department of Biochemistry, Queen's University, February 3, 1998

A Tail of Two Kinases: Protein Kinase B and Glycogen Synthase Kinase-3: Anti-Apototic Signal Transduction and the Wnt/Wingless Pathway
Dr. Jim Woodgett, OCI, University of Toronto, March 3, 1998

Alcohol, Essential Fatty Acids and Nutrition
Dr. Normal Salem, Georgetown University, March 17, 1998

Syndromic Mental Retardation Caused by Mutations in a Putative Chromatin Remodelling Protein
Dr. David Picketts, University of Ottawa, March 24, 1998

Vascular Malformations in the HHT - Endoglin Mutations and TGF-Beta Implications
Dr. Claire Shovlin, University of Edinburgh, Scotland, April 14, 1998

Regulation of Vascular Morphogenesis by Matricellular and Extracellular Matrix Proteins
Dr. Helene Sage, University of Washington, Seattle, WA, April 28, 1998

The Role of NKT Cells in Type I Diabetes
Dr. Alan Baxter, University of Sydney, Sydney, Australia, June 9, 1998

Hemopoietic Cell Death and Cell Differentiation: Role of Transcription Factor SCL
Dr. Trang Hoang, IRCM, University of Montreal, October 20, 1998

Regulation of Differentiation by the Cell Cycle Control Machinery and Developmental Factors
Dr. P. Hamel, University of Toronto, November 3, 1998

Ductal Carcinoma In Situ of the Breast: a Spectrum of Diseases
Dr. Frances O'Malley, University of Toronto, December 10, 1998.

Neuronal Apoptosis and Neurotrophins
Dr. Greg Ross, Queen's University, December 15, 1998

SENIOR STAFF
DEPARTMENT OF PATHOLOGY
AND QUEEN'S UNIVERSITY

LECTURES

SENIOR STAFF
DEPARTMENT OF PATHOLOGY
AND QUEEN'S UNIVERSITY
LECTURES

Dr. S. Cole
Department of Microbiology & Immunology, Queen's University, February 4, 1998.

Dr. R. Deeley
Hamilton Regional Cancer Centre, April 1998

Dr. R. Deeley
Eli-Lilly Pharmaceuticals, Indianapolis, August 1998

Dr. R. Deeley
Center for Experimental Therapeutics, University of Pennsylvania, Philadelphia, November 1998

How the Lab Can Help
Dr. G. Delisle
Continuing Education, Queen's University, November 1998

Luck Favours the Prepared Mind
Dr. A. Giles
Department of Pathology, Queen's University, October 1998

Leukemogenesis by the Chimeric Transcription Factor E2A-Pbx1
Dr. D. LeBrun
Department of Biology, Queen's University, November 1998

Leukemogenesis by the Chimeric Transcription Factor E2A-Pbx1
Dr. D. LeBrun
Department of Pharmacology, Queen's University, November 1998

Somatic Cell Gene Therapy, Two Steps Forward, One Step Back
Dr. D. Lillicrap
Pediatric Grand Rounds, Queen's University, November 1998

Using Technology to Foster Active Learning
Dr. L. Tomalty
Instruction Development Center & Learning Technology Unit, Queen's University, 1998

Computer Assisted Instruction/Innovative Uses of Technology in Teaching
Dr. L. Tomalty
Association of Medical School Microbiology & Immunology, 1998

Antimicrobial Resistant Infections
Dr. D. Zoutman
Nursing Grand Rounds, KGH, March 1998

Infectious Diseases Emergencies
Dr. D. Zoutman with Dr. G. Evans
Department of Medicine, Queen's University, July 1998

SENIOR STAFF
DEPARTMENT OF PATHOLOGY

INVITED LECTURERS
OUTSIDE OF KINGSTON

INVITED LECTURERS OUTSIDE OF KINGSTON
SENIOR STAFF
DEPARTMENT OF PATHOLOGY

Dr. S.P.C. Cole 1) Molecular Therapeutics, Memorial Sloan Kettering Cancer Center, New York, January 20, 1998; 2) Department of Microbiology & Immunology, University of Western Ontario, London, January 29, 1998; 3) 8th Fisher Winternational Symposium on Cellular and Molecular Biology, "Membrane Proteins in Health and Disease", Banff, Alberta, April 5, 1998; 4) Cancer Center, University of Illinois at Chicago, Chicago, IL, May 4, 1998; 5) Department of Pharmacology, University of Tennessee, Memphis, TN, May 6, 1998; 6) 10th NCI-EORTC Symposium on New Drugs in Cancer Therapy, Amsterdam, The Netherlands, June 16, 1998; 7) Symposium on Multiple Drug Resistance Genes and Gene Transfer, XIII International Congress of Pharmacology, Munchen, Germany, July 27, 1998; 8) Eli Lilly Pharmaceutical Company, Indianapolis, IN, August 25, 1998 (with Dr. R. Deeley); 9) Smith Kline & Beecham, Collegeville, PA, September 15, 1998.

Dr. R. Deeley 1) Hamilton Regional cancer Centre, April 1998; 2) Eli-Lilly Pharmaceuticals, Indianapolis, August 1998; 3) Center for Experimental Therapeutics, University of Pennsylvania, Philadelphia, November 1998.

Dr. G. Delisle 1) Image Data Bases for Undergraduate Education, ASM Undergraduate Conference, Atlanta, May 1998; 2) Interactive CDs and Medical Education, AAMC Microbiology Educators Conference, Myrtle Beach, SC, May 1998; 3) Global Warming and Infectious Disease, Eastern Ontario Practitioners in Infection Control Education Day, October 1998; 4) Distance Education and Technology for on Campus Students ad data Based Resources for Educators, Michigan Branch Meeting of the ASM, Saginaw MI, October 1998.

Dr. B. Elliott 1) "Role of hepatocyte growth factor and extracellular matrix n survival, growth and metastasis of breast cancer", Gilead Sciences, Foster City, CA, April 21, 1998; 2) "Role of hepatocyte growth factor and extracellular matrix n survival, growth and metastasis of breast cancer", Dept. Of Physiology, Michigan State University, East Lansing, MI, May 19, 1998.

Dr. S. Ford 1) "Problems in HIV health care delivery in prison", US National AIDS Update, San Francisco, March 1998.

Dr. P. Greer 1) BioChem Therapeutic Inc., Montreal, PQ, 1998.

Dr. K. Harrison 1) "Risk of uniparental disomy in Robersonian translocation carriers: identification of UPD14 in a small cohort", 48th Annual Meeting of the American Society of Human Genetics, Denver, Colorado, October 1998.

Dr. R. Kisilevsky 1) "Inflammation and cholesterol mobilization: what is serum amyloid A's physiologic function?", McGill University, March, 1998; 2) "Serum Amyloid A, from amyloidosis to atherogenesis", Gordon Research Conference, Hennicker, New Hampshire, June 1998; 3) "AA amyloidosis", VIIIth International Amyloid Symposium, Mayo Clinic, Rochester, Minnesota,

August, 1998; 4) "Of starch and silk: Amyloidogenesis and strategies for its prevention", International workshop on protein conformational diseases, Ein Boqeq, Israel, November 1998; 5) "Amyloidogenesis: lessons from an in vivo model", University of Tennessee Medical Center, December, 1998.

Dr. D. Lillicrap 1) "Animal models for the pre-clinical evaluation of human gene therapy", Frankfurt, Germany, January 1998; 2) "Diagnostic PCR in the routine hemostasis laboratory", Banff, Alberta, April 1998; 3) "Gene therapy for Hemophilia A: current status and future aspects", Den Hague, Holland, May 1998; 4) "The molecular basis of hemophilia B", Den Hague, Holland, May, 1998; 5) "von Willebrand disease, Coagulation and treatment", Canadian Association of Hemophilia Nurses Workshop, Montreal, Quebec, October 1998; 6) "Identification and management of patients with thrombotic tendency", Cornwall General Hospital, October 1998; 7) "Canine hemophilia A: a large animal model for the evaluation of factor VIII gene therapy", Salk Institute, San Diego, CA, November 1998.

Dr. S. Ludwin 1) University of Toronto Resident's Research Day, May 1998; 2) "The response of oligodendrocytes to injury", University of BC, May 1998; 3) "What is gliosis", International Society of Neuroimmunology, Montreal, PQ, August 1998; 4) European Congress Training and Research in MS, Stockholm, September 1998; 5) Myelin Project meeting, France, October 1998.

Dr. P. Manley 1) GI Pathology Seminar, Stanford University, April 1998.

Dr. D. Maurice 1) "cAMP mediated inhibition of vascular smooth muscle cell migration: role of cAMP-phosphodiesterases", Meriden, NH, June 1998; 2) "cAMP mediated inhibition of vascular smooth muscle cell migration: role of cAMP-phosphodiesterases", New London, NH, June 1998; 3) "PDE3 expression in cardiovascular tissues", Meriden, NH, June 1998; 4) "PDE3 expression in cardiovascular tissues", New London, NH, June 1998.

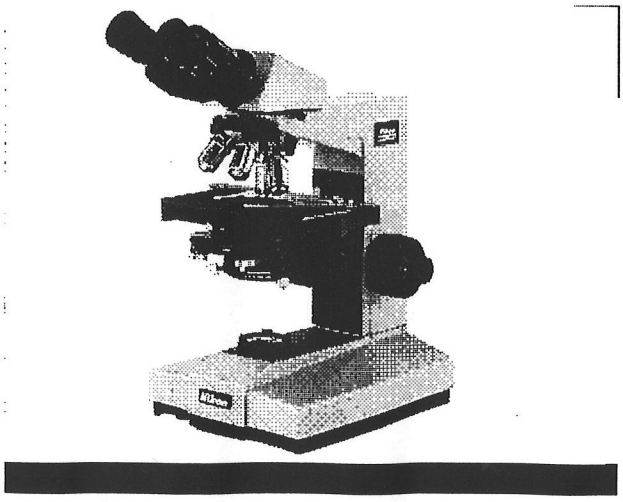
Dr. M. Raymond 1) Workshop presentation at Canadian Society of Clinical Chemists Annual Meeting.

Dr. S. SenGupta 1) "Tuberculosis", Prince Edward County Memorial Hospital, November 1998.

Dr. S. Taylor 1) Association of Genetic Counsellors of Ontario, Peterborough, ON, June 1998.

Dr. D. Zoutman 1) "Cost effectiveness of infection control", Kananaskis, Alberta, May, 1998; 2) "Antimicrobial resistant organisms", Trenton Memorial Hospital, May 1998; 3) Infection control considerations in home care", KFLA Community Care Access Center, May 1998; 4) "Controlling use of antibiotics in general practice", Cobourg Hospital, May, 1998; 5) Antimicrobial resistance", Perth, ON, June 1998; 6) "Utilization of antibiotics", Lennox & Addington Hospital, October 1998.

RESEARCH PROJECTS AND GRANTS IN PROGRESS



RESEARCH PROGRAMS

Research is broadly grouped into five main areas. Amyloid and Alzheimer's Disease, Cancer Research, Hemostasis and Thrombosis, Molecular and Cytogenetics, and Neuropathology Research. Active collaboration exists between members of the Department of Pathology and the Departments of Biochemistry, Immunology, Infection Control, Medicine, Microbiology and Pediatrics. Investigators in the Department thus have enhanced research opportunities by linking their efforts with individuals in other departments and institutes on campus.

Dr. A.H. Boag: Dr. Boag's research projects involve: 1) Expression of Multidrug Resistance Protein in Lung Cancer (with Drs. Cole & Deeley); 2) The Role of Prostatic Inflammation in Benign Prostatic Hyperplasia (with Dr. C. Nickel); 3) Endogenous Galectin Expression in the Male Urogenital Tract. In collaboration with Dr. H. Ceri (University of Calgary), Dr. J.C. Nickel (Dept. of Urology) and Dr. I. Young (Dept. of Pathology); 4) Loss of heterozygosity in the Cowden's Gene Region of chromosome 10 in sporadic breast and prostate cancer (with Dr. Lois Mulligan); 5) Mechanisms of Drug Resistance in Prostatic Adenocarcinoma: Expression of Multidrug Resistance-associated Protein, P-Glycoprotein, LRP and Topoisomerase II (with Dr. B. Campling); 6) Expression of Multidrug Resistance-associated Protein in Serous Neoplasms of the Ovary (in collaboration with Dr. Steve Ades (Department of Medicine) and Dr. B. Campling (Cancer Research Group); 7) Outcome Analysis of Resected Non-Small Cell Lung Cancer at Kingston General Hospital, 1988-1997 (with Drs. Sebastien Gilbert and D. Petsikas, Department of Surgery, Kingston General Hospital and Queen's University); 8) Computerized three Dimensional Microscopic Image Reconstruction of Prostatic Adenocarcinoma.

Dr. S.P.C. Cole: Dr. Cole's research projects involve 1) Cellular and molecular studies of MRP-related multidrug resistance (with Dr. R. Deeley); 2) Molecular mechanisms of resistance to natural product and platinum-containing drug (Dr. R. Deeley); 3) Investigations of topoisomerase II and drug resistance; 4) Maintenance of Fluorescence Activated Cell Sorter and Confocal Microscope; a Multi-user Facility (with B. Elliott et al); 5) Molecular Mechanisms of Drug Resistance (with Drs. B. Campling and R. Deeley); 6) Multidrug Resistance conferred by MRP (with Dr. R. Deeley).

Dr. C.P. Collier: Dr. Collier's research projects involve 1) Myoglobin & Troponin I - multidisciplinary studies (with K. Gleeson, N. Ali, R. Morton, J. Drover, G. Dagnone); 2) External quality assessment survey (with R. Yu); 3) Laboratory utilization - focus projects (L. Corcoran); 4) Multivariate Analysis of QC from Multichannel Analysers (with Y. Liu and T. Smith); 5) Laboratory Utilization Studies (with D. Waugh); 6) Monoclonal Gammopathy Database (with C. Onochie, Dr. J. Matthews and Dr. M. Raymond); 7) PBL Survey; Laboratory Utilization Project (with R. Thas); 8) Troponin I Data Analysis (with B. Thomas); 9) TSN: Imposters Anonymous (with Dr. S. Wilcox).

Dr. R.G. Deeley: Dr. Deeley's research projects involve 1) Effect of estrogen on gene expression in liver; 2) Molecular and cellular studies of MRP-related multidrug resistance (with S.P.C. Cole); 3) Molecular basis of cisplatin resistance in small cell lung cancer line (with B. Campling, J. Gerlach); 4) Mechanisms in drug resistance (with S. Cole, B. Campling); 5) Maintenance of Fluorescence Activated Cell Sorter and Confocal Microscopy: a Multi-User Facility (with B. Elliott

et al); 6) Multidrug Resistance Conferred by MRP (with S. Cole); 7) Molecular Mechanisms of Resistance to Natural Product and Platinum-Containing Drugs (with S. Cole).

Dr. G. Delisle: Dr. Delisle's research projects involve 1) Microbes in Motion, 2nd Edition, (with L. Tomalty); 2) ASM National collection of microbiological materials (with F. Pfaender); 3) SWEP Summer Student (with L. Tomalty).

Dr. D. Dexter: Dr. Dexter's research projects involve: 1) Image collection, digitization and data bank archive.

Dr. B.E. Elliott: Dr. Elliott's research projects involve: 1) Role of an hepatocyte growth factor autocrine loop in growth and metastasis of breast cancer; 2) Hepatocyte Growth Factor in Survival and Metastasis of Breast Carcinoma: Effect of Signalling Through the Cell Adhesion Complex; 3) Signal Transduction in Regulation of Autocrine HGF Expression in Cancer Metastasis (PDF S. Hung); 4) Maintenance Grant for Multi-User Equipment: Flow Cytometer and Confocal Microscope (B. Elliott et al); 5) Development of Hepatocyte Growth Factor (HGF) Peptide Antigonists as a novel Approach to Therapeutic Intervention in Breast Cancer.

Dr. A. Fletcher: Dr. Fletcher's research projects involve: 1) A novel approach to the diagnosis and treatment of endometriosis; photodynamic therapy.

Dr. S.E. Ford: Dr. Ford's research projects involve 1) Development and application of longitudinal "treatment adherence" questionnaire for patients treated with proteinase inhibitors for HIV; 2) Anatomical Study of LIMA in the context of Intra Operative Dissection; 3) Value of Minimal A/V Conduction System Dissections in Forensic Pathology.

Dr. P.A. Greer: Dr. Greer's research projects involve: 1) A transgenic analysis of *fps/fes* proto-oncogene function; 2) Regulation of the *fps/fes* proto-oncogene; 3) A Molecular and Genetic Analysis of the *fps* proto-oncogene; 4) A Molecular and genetic Analysis of the Murine *fer* gene; 5) Development of Transgenic Mouse Models for the in vivo Analysis of Anti-Angiogenic Treatment of Cancer.

Dr. K. Harrison: Dr. Harrison's research projects involve: 1) Analysis of Malignant Lymphomas by Comparative Genomic Hybridization (with D. LeBrun); 2) Identification of Genetic Changes in Oligodendrogliomas using Comparative Genomic Hybridization (with S. Ludwin and P. Bandy-Dafoe).

Dr. D. Hurlbut: Dr. Hurlbut's research projects involve: 1) Mast Cells in Gastroesophageal Reflux Disease.

Dr. R. Kisilevsky: Dr. Kisilevsky's research projects involve: 1) Amyloidogenesis: an analysis of the causative factors in an experimental murine model; 2) An approach to the development of a treatment for amyloids and Alzheimer's disease; 3) CD Spectropolarimeter.

Dr. D. LeBrun: Dr. LeBrun's research projects involve: 1) Analysis of Malignant Lymphomas by

Comparative Genomic Hybridization; 2) Biological consequences of E2A-PBX1 expression.

Dr. D. Lillicrap: Dr. Lillicrap's research projects involve: 1) Factors regulating the developmental expression of coagulation factor IX; 2) Receptor-Mediated Delivery of Novel Factor VIII Transgenes in Gene Therapy for Hemophilia A; 3) Post-transcriptional regulation of factor VIII expression; 4) Transcriptional regulation of the factor VIII gene; 5) Flow effects on endothelial cell expression of von Willebrand factor; 6) Influence of Genotype and Environment on Endothelial Cell Expression of von Willebrand Factor.

Dr. S.K. Ludwin: Dr. Ludwin's research projects involve: 1) Demyelination, remyelination and oligodendrocyte behaviour in vivo and in organotypic cultures of the central nervous system; 2) Collaborative work on Alzheimer's Disease (with Dr. R. Kisilevsky); 3) Identification of Genetic Changes in Oligodendrogliomas (with Karen Harrison).

Dr. P.N. Manley: Dr. Manley's research project involves 1) Contract - Collection, verification and dissemination of tissue sections of study material.

Dr. D. Maurice: Dr. Maurice's research projects involve: 1) Cyclical nucleotide phosphodiesterases in arteries; 2) The regulation of gene expression and product availability in shear stress and thrombin stimulated endothelium in vivo; 3) Effects in nitrovasodilators, NO and CO on blood vessel function; 4) Mechanisms of erectile dysfunction.

Dr. J. Rossiter: Dr. Rossiter's research projects involve: 1) Molecular mechanisms of axotomy-induced apoptosis of rat facial motoneurons; 2) Motoneuron rescue with HSU encoding Bcl-2; 3) The expression of the GDNF/RET ligand complexes following peripheral nerve axotomy; 4) Molecular Mediators of Motoneuronal Degeneration.

Dr. C. Rowlands: Dr. Rowland's research projects involve: 1)Response of psoriatic lesions to topical "skincap"; 2) Histological Differences Between Hypertrophic Post-Burn Scars Treated with Silicone Occlusion and Those Left Untreated; 3) Cytology of Ascitic Fluid in a Patient with Granulocytic Sarcoma; 4) Dermatofibrosarcoma Protuberans: A Review.

Dr. S. SenGupta: Dr. SenGupta's research projects involve: 1) Histopathologic and clinical differences between short and long term survivors of breast cancer; 2) Study of breast cancer and the environment (with K. Aronsen); 3) Histological characteristics of wrist soft tissues in rheumatoid and non-rheumatoid patients (with C. Small and D. Pichora); 5) Investigation of the biomechanical environment for lumbar fusion (with D. Yen).

Dr. Lois Shepherd: Dr. Shepherd's research projects involve: 1) Canadian Study Chair NCIC CTG Co. 9 - A phase III evaluation of high dose levamisole plus 5-fluorouracil and leucovorin as surgical adjuvant therapy for high risk colon cancer; 2) A multicentre randomized study of dose intensive chemotherapy as primary treatment in a multimodality approach for locally advanced/inflammatory breast cancer (MA10); 3) A double-blinded randomized trial of tamoxifen versus placebo in premenopausal, node positive and node negative women who have completed adjuvant chemotherapy (MA12); 4) A randomized trial of antiestrogen therapy versus combined antiestrogen

and octreotide LAR therapy in the adjuvant treatment of post-menopausal breast cancer (MA14); 5) A phase I/II study of docetaxel and epirubicin as first line therapy for metastatic breast cancer (MA15); 6) A randomized comparative trial of high dose chemotherapy and autologous stem cell support vs standard therapy following response to anthracycline or taxane chemotherapy in women with metastatic breast cancer (MA16); 7) A phase III randomized double blind study of vorozole versus placebo in women with primary breast cancer completing five or more years of adjuvant tamoxifen (MA17); 8) Chemotherapy with 5-FU and 1-leucovorin following potentially curative resection of liver or lung metastasis from colorectal cancer (CO7); 9) Evaluation of 5-FU by bolus injection versus 5-FU by prolonged venous infusion versus 5-FU by bolus injection plus leucovorin and levamisole prior to and following combined prolonged venous infusion 5-FU plus pelvic XRT in patients with rectal cancer (SWOG 9304) (CO11); 10) Phase III prospective randomized trial comparing laparoscopic assisted colectomy versus open colectomy for colon cancer (INT 0146) (CO12); 11) Radiotherapy or radiotherapy plus ABVD versus ABVD alone in early stage Hodgkin's disease (HD6) 12) A phase 1/11 study of chemotherapy intensification for patients with poor prognosis advanced stage aggressive histology lymphoma: VACOP-B plus etoposide and cyclophosphamide with RhuGM-CSF (VACOP-B/EC/CSF) (LY4). Coinvestigator: 13) EBV and Intermediate Risk Lymphoma; 14) A Tumour, Tissue, and Clinical Data Bank for Breast Cancer Patients Participating in NCIC CTG Clinical Trials; 15) Prognostic Factor Panel to Predict Preferred Therapy for Node Positive Postmenopausal Breast Cancer Patients (CAF vs Tamoxifen). Biologics Companion to SWOG 9941; 16) Molecular Markers with Prognostic and Predictive Value in Locally Advanced Breast Cancer. EURTC Comparison Study to NCIC CTG MA10.

Dr. S.A.M. Taylor: Dr. Taylor's research project involves: 1) Genetic analysis of the BRCA1 gene in familial breast and ovarian cancer; 2) Ontario registry for studies of familial breast cancer; 3) Ontario registry for studies of colorectal cancer; 4) A semi-quantitative PCR based assay for the assessment of familial breast cancer risk; 5) Molecular and cytogenetic delineation of Aicardi Syndrome.

Dr. L. Tomalty: Dr. Tomalty's research projects involve: 1) Microbes in Motion II (with G. Delisle).

Dr. I. Young: Dr. Young's research projects involve: 1) The Pathology of Chronic Prostatis; 2) BCG Therapy of Prostatic Adenocarcinoma in a Canine Model.

Dr. D. Zoutman: Dr. Zoutman's research projects involve: 1) National Multiresistant *Staphylococcus aureus* (MRSA) Surveillance Project; 2) Hospital Utilization Improvement Trial of Surgical Prophylactic Antibiotics phase 3, analytical component; 3) National surveillance of nosocomial surgical wound infections - Project Leader of Canadian Hospital Epidemiology Committee; 4) Phase 3 Randomized Double Blind Placebo Controlled Trial of Zanamivir in the Treatment of Influenza Infections; 5) National Study of Infections in Hemodialysis Central Lines; 6) Development and Testing of a New Antimicrobial Drug of which I am an Inventor (with Drs. Nakatsu, Brien, Marks and Vukomanovic); 7) Design and Creation of Patient Education Video and Interactive CD ROM on "Adherence to Tuberculosis Medications" (with Dr. E. Costello); 8) Factors Affecting Antibiotic Decisions (FAAD) Research Project; 9) Resources for Infection Control in Hospitals in Canada Study.

1998 RESEARCH PROJECTS AND GRANTS

NAME	AGENCY	AMOUNT	TITLE OF RESEARCH PROJECT
Dr. A. Boag	Queen's Summer Work Experience Program	$4,480.00	Summer studentship. Three dimensional reconstruction of human prostate adenocarcinoma.
Dr. S. Cole & Dr. R. Deeley	MRC	$138,000	Cellular and Molecular Studies of Drug Resistance Mediated by MRP
Dr. B. Campling, S. Cole and R. Deeley	NCIC	$145,000	Molecular mechanisms of Drug Resistance
Dr. S. Cole	NCIC	$139,000	Investigation of Topoisomerase II in Drug Resistance
Dr. C. Collier	Pathology Clinical Trust Fund	$2,850	Cost Effective Triage for Chest Pain by Analysis of Myoglobin and Troponin I
Dr. R. G. Deeley	MRC	$92,936	Effect of estrogen on gene expression in liver
Drs. B. Campling, J. Gerlach, R. Deeley	MRC	$39,266	Molecular Basis of Cisplatin Resistance in Small Cell Lung Cancer Line.
Dr. R. Deeley & Dr. S. Cole	NCIC	$189,000	Multidrug Resistance Conferred by MRP
Dr. R. Deeley & Dr. S. Cole	Eli Lilly	$195,000	Molecular Mechanisms of Resistance to Natural Product and Platinum-Containing Drugs
Dr. G. Delisle & Dr. L. Tomalty	Wm. C. Brown Publishers	$75,000	CDROM Production of "Microbes in Motion" 2nd Edition
Drs. G. Delisle, F. Pfaender	National Science Foundation	$232,500	ASM National Collection of Microbiological Materials
Dr. G. Delisle & Dr. L. Tomalty	Queen's SWEP	$3,500	SWEP Student Summer Assistant
Dr. B. Elliott	Canadian Breast Cancer Foundation	$35,000	Hepatocyte Growth Factor in Survival and Metastasis of Breast Carcinoma: Effect of Signalling Through the Cell Adhesion Complex
Dr. B. Elliott	US Army Breast Cancer Research Initiative	$118,365	Role of an hepatocyte growth factor autocrine loop in growth and metastasis of breast cancer
Dr. B. Elliott	MRC Maint. Grant	$25,800	Maintenance grant for flow cytometer and confocal microscope facility

Dr. B. Elliott	ARC, Queen's	$5,000	Development of Hepatocyte Growth Factor (HGF) Peptide Antagonists as a Novel Approach to Therapeutic Intervention in Breast Cancer.
Dr. B. Elliott	USA/MRMC Trainee Funds	$40,500	Signal Transduction in Regulation of Autocrine HGF Expression in Cancer Metastasis. PDF for W. Hung.
Drs. A. Fletcher, R.L. Reid, D.A. VanVugt, J.C. Kennedy	MRC	$69,798	A Novel Approach to the Diagnosis and Treatment of Endometriosis: Photodynamic Therapy
Dr. P. Greer	MRC	$79,000	Regulation of the fps/fes protooncogene
Dr. P. Greer	NCI	$79,000	A transgenic analysis of fps/fes protooncogene
Dr. P. Greer	MRC/PMAC	$123,230	Development of Transgenic Mouse Models for the in vivo Analysis of Anti-Angiogenic Treatment of Cancer.
Dr. P. Greer	NCIC	$100,500	A Molecular and Genetic Analysis of the fps proto-oncogene
Dr. P. Greer	MRC	$93,628	A Molecular and Genetic Analysis of the murine fer gene.
Dr. K. Harrison & Dr. S. Ludwin	JP Bickell Foundation	$24,050	Identification of Genetic Changes in Oligodendrogliomas using Comparative Genomic Hybridization
Dr. R. Kisilevsky	NEUROCHEM Inc.	$165,000	An approach to the development of a treatment for amyloids and Alzheimer's disease
Dr. R. Kisilevsky	NEUROCHEM Inc.	$330,000	An approach to the development of a treatment for amyloid and Alzheimer's disease (Contract)
Dr. R. Kisilevsky	MRC	$102,400	Amyloidogenesis: an analysis of the causative factors in an experimental murine model
Dr. R. Kisilevsky	Clinical Trust Fund	$10,000	Amyloid Protein: GAGs Binding Motifs as Potential Targets for Anti-Malarial Therapy
Dr. D. LeBrun	NCIC	$88,000	Biological consequence of E2A-PBX1 expression
Dr. D. LeBrun & Dr. K. Harrison	Clare Nelson Bequest	$7,000	Analysis of Malignant Lymphomas by Comparative Genomic Hybridication

Dr. D. LeBrun	KGH Pathology Clinical Trust Fund	$3,719	Biological Consequences of Expression of the E2A-PBX1 Leukemogenic Transcription Factor
Dr. D. Lillicrap	Bayer/Red Cross	$65,753	Receptor-mediated delivery of novel factor VIII transgenes in gene therapy for hemophilia A
Dr. D. Lillicrap	Canadian Hemophilia Society	$61,000	Post-transcriptional regulation of FVIII expression
Dr. D. Lillicrap	Heart & Stroke Foundation	$83,057	Influence of Genotype and Environment on Endothelial Cell Expression of Von Willebrand Factor
Dr. D. Lillicrap	Heart & Stroke Foundation	$53,250	Transcriptional regulation of the factor VIII gene
Dr. D. Lillicrap	MRC	$102,523	Factors Regulating the Developmental Expression of Factor IV
Dr. D. Lillicrap	HSFO	$53,500	Career Investigator Award
Dr. P. Manley & Dr. J. Pater	NCIC	$42,500	Contract: Collection, verification and dissemination of tissue sections of study material
Dr. D. Maurice	HSFO	$75,000	Cyclic nucleotide phosphodiesterases in arteries
Dr. D. Maurice, Dr. A. Giles, Dr. M. Richardson	HSFO	$74,855	The regulation of gene expression and product availability in shear stress and thrombin stimulated endothelium in vivo
Dr. D. Maurice, Drs. G. Marks, K. Nakatsu, J. Brien	HSFO	$70,000	Effects of Nitrovasodilators, NO and CO on Blood Vessel Function
Dr. J.P. Rossiter	ALS Society of Canada	$69,000	Molecular Mechanisms of Axotomy-Induced Apoptosis of Rat Facial Motoneurons
Dr. J. Rossiter & Dr. L. Mulligan	Botterell Foundation	$3,500	The expression of the GDNF/RET ligand complexes following peripheral nerve axotomy
Dr. J. Rossiter & Dr. L. Mulligan	Pathology Clinical Trust Fund	$9,970	The expression of the GDNF/RET ligand complexes following peripheral nerve axotomy
Dr. J. Rossiter	Pathology Clinical Trust Fund	$10,000	Molecular Mediators of Motoneuronal Degeneration
Dr. J. Rossiter	ALS Society of Canada	$30,000	Molecular Mediators of Motoneuronal Degeneration

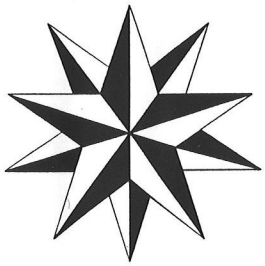
Drs. L. Shepherd, K. Pritchard, P. Watson, M. Pollak	NCIC	$47,399	Clinical Trials - A tumour, tissue and clinical data bank for breast cancer patients
Drs. S. Taylor, D. Pross, C. Forster, D. Lillicrap, R. Deeley, L. Mulligan, M, Khalifa, E. Sterns	OCTRF (NIH)	$13,000	Genetic analysis of the BRCA1 gene in familial breast and ovarian cancer
Dr. S. Taylor, et al	Cancer Care Ontario	20,000	Ontario Registry for Studies on Colorectal Cancer
Dr. S. Taylor	PSI	$65,000	Molecular and cytogenetic delineation of Aicardi Syndrome
Dr. S. Taylor et al	NIH	$23,000	Ontario Registry for Studies of Familial Breast Cancer
Dr. S. Taylor	OAML	$11,000	A Semi-Quantitative PCR Based Assay for the Assessment of Familial Breast Cancer Risk
Dr. S. Taylor, et al	PSI/MRC	$51,000	Molecular and Cytogenetic Delineation of Aicardi Syndrome
Dr. D. Zoutman	Glaxo Wellcome Incorporated	depending on enrollment	Phase 3. Randomized Clinical Trial of GG167 in Treatment & Prevention of Influenza A & B Infections
Dr. D. Zoutman, Drs. K. Nakatsu, J. Brien, G. Marks and D. Vukomanovic	Assoc. Dean Research Queen's	$20,000	Development & Testing of a New Antimicrobial Drug of which I am an Inventor
Dr. D. Zoutman	PSI	$70,000	Factors Affecting Antibiotic Decisions (FAAD) Research Project
Dr. D. Zoutman	Laboratory Center for Disease Control	$10,000	National Study of Infections in Hemodialysis Central Lines

DEPARTMENT OF PATHOLOGY
GRANTS AWARDED FOR THE PERIOD
1998 - 1999

NAME	GRANTING AGENCY	AMOUNT
Cole, Dr. Susan	M.R.C.	$138,000.
Cole, Dr. Susan	N.C.I.C.	$145.000.
Cole, Dr. Susan	N.C.I.C.	$139,000.
Deeley, Dr. Roger	N.C.I.C.	$189,000.
Deeley, Dr. Roger	Eli Lilly	$195,000.
Deeley, Dr. Roger	M.R.C.	$ 39,266.
Deeley, Dr. Roger	M.R.C.	$ 92,936.
Elliott, Dr. Bruce	U.S.Army	$118,364.
Elliott, Dr. Bruce	U.S.Army	$ 45,000.
Elliott, Dr. Bruce	M.R.C.	$ 25,800.
Elliott, Dr. Bruce	CCO/OCTRF	$ 20,000.
Elliott, Dr. Bruce	Advisory Research Committee	$ 5,000
Greer, Dr. Peter	M.R.C.	$ 93,628.
Greer, Dr. Peter	N.C.I.C.	$100,498
Greer, Dr. Peter	M.R.C. / PMAC	$123,230.
Harrison, Dr.Karen	J.P. Bickell Foundation	$ 24,049.
Harrison, Dr. Karen	Clare Nelson	$ 7,000.
Kisilevsky, Dr. Robert	KGH Clinical Trust Award	$ 10,000.
Kisilevsky, Dr. Robert	M.R.C.	$102,058.
Kisilevsky, Dr. Robert	Neurochem	$248,000.
Lebrun, Dr. David	N.C.I.	$ 89,491.
Lebrun, Dr. David	KGH Clinical Trust Award	$ 3,719.
Lillicrap, Dr. David	M.R.C.	$102,523.
Lillicrap, Dr. David	Heart & Stroke	$ 53,250.
Lillicrap, Dr. David	Heart & Stroke #A3661	$ 83,057.
Lillicrap, Dr. David	CanadianHemophilia Society	$ 61,000.
Lillicrap, Dr. David	Genetic Therapy	$193,062.
Lillicrap, Dr. David	Bayer Inc.	$138,000.
Lillicrap, Dr. David	MRC Studentships (Begbie & Keightley)	$ 35,248.
Lillicrap, Dr. David	Bayer/Cdn. Red.Cross	$ 90,748.
Maurice, Dr. Donald.	H&S	$ 71,541.
Maurice, Dr. Donald	PhARMACEUTICAL Mfg.	$ 31,536.
Maurice, Dr. Donald	M.R.C.	$ 31,320.
Rossiter, Dr. John	A.L.S.	$ 30,000.
Rossiter, Dr. John	KGH Clinical Trust Award	$ 10,000.
Rossiter, Dr. John	KGH Clinical Trust Award	$ 9,970.
Taylor, Dr. Sherry	O.C.T.R.F. (NIH)	$ 13,000.
Taylor, Dr. Sherry	Cancer Care (NIH)	$ 22,939.
Taylor, Dr. Sherry	N.I.H.	$ 23,700.
Taylor, Dr. Sherry	O.A.M.L.	$ 11,000.
Taylor, Dr. Sherry	PSI/MRC	$ 65,000.
Taylor, Dr. Sherry	PSI/MRC	$ 51,000.
Zoutman, Dr. Dick	PSI	$ 70,000.
	TOTAL:	**$3,151,933.**

January 28, 1999

PERSONNEL, AWARDS AND SIGNIFICANT EVENTS



PERSONNEL, AWARDS AND SIGNIFICANT EVENTS

PMAC/MRC AWARD

Dr. Donald Maurice has received the distinguished Pharmaceutical Manufacturing Association of Canada Health Research Foundation/Medical Research Council Career Award in Health Sciences Award, salary support for 1996-2001. Only one granted in Canada.

ONTARIO HEART & STROKE FOUNDATION

Dr. David Lillicrap has been an Ontario Heart and Stroke Foundation Career Investigator since 1995.

ROBERT PRENTICE AWARD - RESIDENT PATHOLOGY TEACHING

Pathology Residents were pleased to present **Dr. Lewis Tomalty** with the Robert S.A. Prentice Award for excellence in teaching.

MRC SCHOLARSHIP

Dr. Peter Greer has received a Medical Research Council of Canada Scholarship from 1994-1999.

AESCULAPIAN SOCIETY TEACHING AWARD

Dr. Samuel Ludwin received the Aesculapian Society Teaching Award for 1998.

Ice Storm '98

One of the most (if not the most) devastating natural disasters struck Kingston on Wednesday, Thursday and Friday (Jan 7-9) 1998.

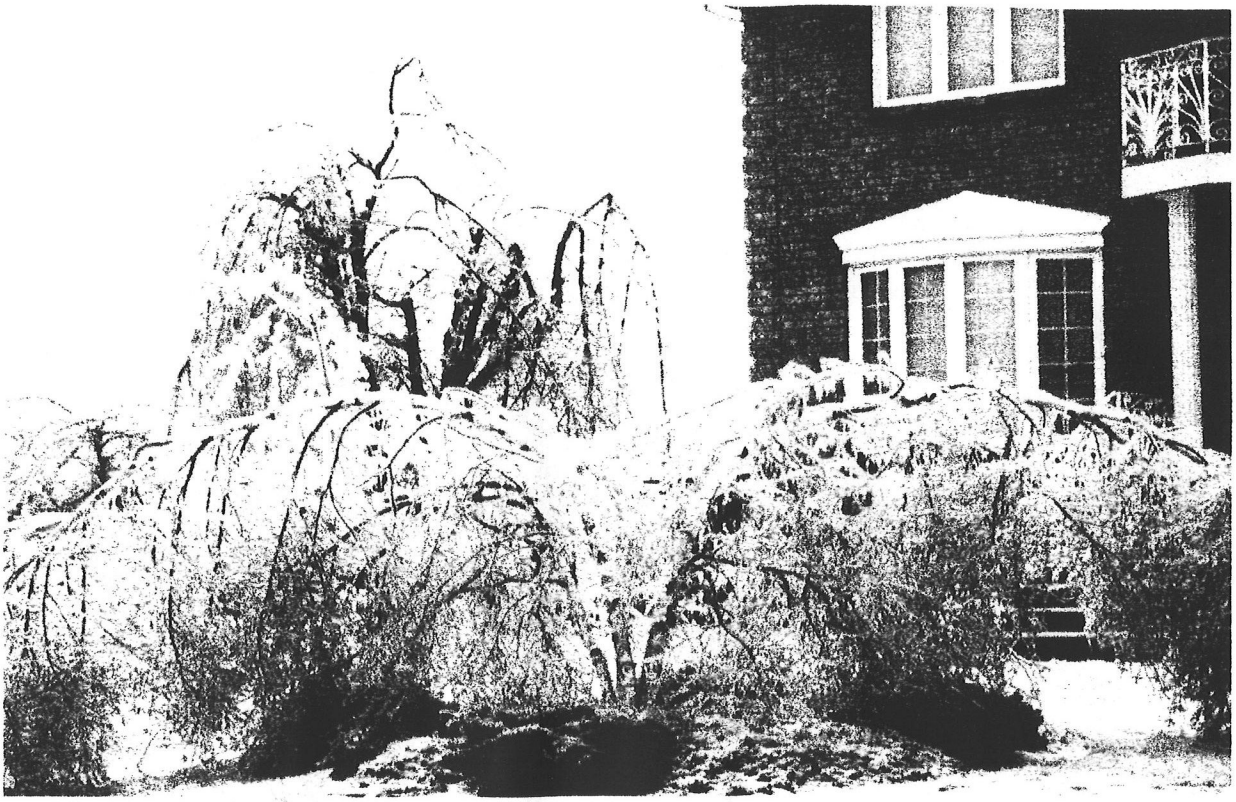
By January 18th there were many areas still without power, telephone and cable. In some Quebec regions power was not restored for several more weeks. Queen's University was shut down from Thursday until Monday with classes resuming Thursday the 15th.

Kingston General was on Emergency power at least once during the first power problems on Thursday the 8th.

Closer to home in Richardson Labs, we had two major power failures: Thursday the 8th from 03:25-10:08 (6 hours) and Saturday the 10th from just before midnight to 18:07 (18 hours). At times we had extension cords going across every floor into KGH powering the ultracold freezers in the labs. Most of the contents survived.

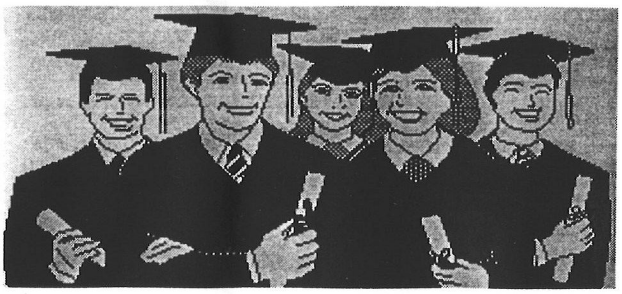
Our computer servers in the department are all connected to UPS (Uninterruptible Power Supplies - essentially lead acid batteries and power invertors) and shut themselves down about 14 minutes into each failure, with no damage.

ICE STORM 1998



MORE ICE STORM

UNDERGRADUATE, GRADUATE AND POSTGRADUATE EDUCATIONAL PROGRAMS



UNDERGRADUATE, GRADUATE AND POSTGRADUATE EDUCATIONAL PROGRAMS

UNDERGRADUATE (Written by Ms Barbara Saunders)

Phase I Pathology is given in the academic year from mid-November to mid-February to first year medical students. Enrolment is 75 students.

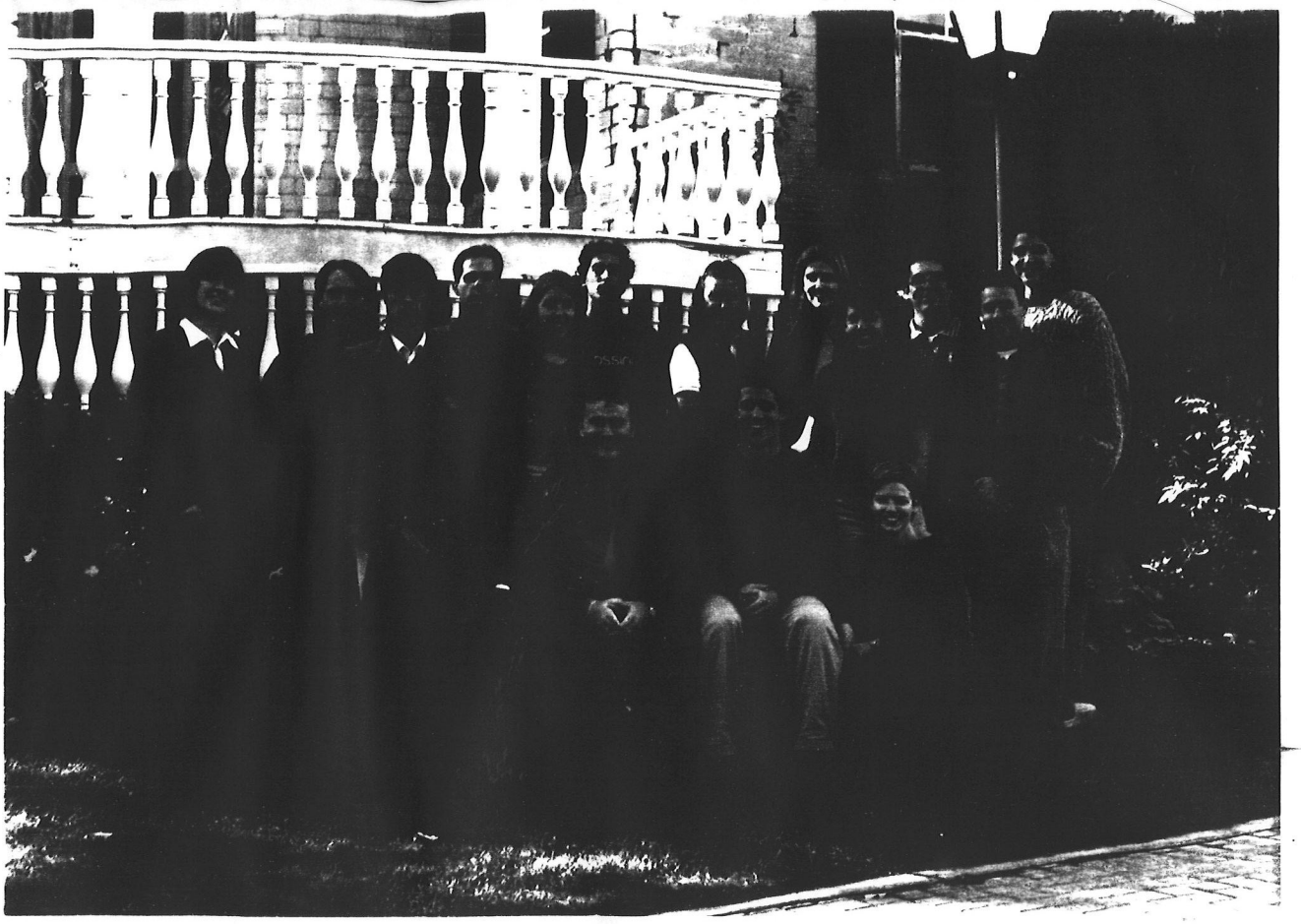
Phase II Pathology is given after Phase I to 2nd year medical students but not in a Pathological Unit as such, but rather as a course combined with many other disciplines. Enrolment is 75.

Rehabilitation Medicine 234 The Department coordinates with the School of Rehabilitation Therapy and teaches a Pathology unit to Occupational and Physical Therapy students. This section runs for two weeks each year beginning mid-September. Dr. SenGupta is the Coordinator and the lecturers are Departmental residents. Enrolment is approximately 75 students.

Pathology 410/824 is a half credit course running in the Fall term and offered to 4th year Life Science students combined with a graduate course for non-medical students. Dr. John Rossiter is the Coordinator. 38 undergraduate students and 4 graduate students enrolled in this course in 1998. Evaluation for undergraduate students includes a mid-term and final exam whereas graduate students, in addition to the exams, are expected to submit a term paper.

Pathology 420 is a full credit thesis project course co-ordinated by Dr. David Lillicrap. Department faculty members supervise students on a year long thesis project. Evaluations include a draft thesis introduction, seminar presentation, project defence, laboratory work evaluation and a written thesis.

Pathology 430/826 is a half credit course that is offered alternate winters. Drs. Robert Kisilevsky and David Lillicrap are Coordinators. Four diseases are covered in depth, examining the molecular events leading to the development of these disorders. Enrolment is limited to 12 with preference given to graduate students. Evaluation includes seminar presentations and written reports. Examinations are limited to undergraduate students.



Left - Right (Back) Leah Young, David Hipfner, Chris Udell, Brian Brown, Adina Vultur, Angela Keightley, Lee Fraser, Bob St. Onge; (Middle) Jin Gui, Deborah Greer, Meg Begbie, Kevin Weigl; (Front) Carla Cuthbert, Jordan Hansford, Ben Matthews, Jennifer Struthers

GRADUATE PROGRAMME (Written by Ms Barbara Saunders)

The Graduate Programme in the Department of Pathology is administered by the Graduate Program Committee. The Committee consists of five members of the Department, one of whom is designated Co-ordinator, plus the Head of the Department (Dr. Paul Manley) and two graduate student representatives *ex officio*. Dr. Bruce Elliott co-ordinated the Program and chaired the Department of Pathology Graduate Committee until June 30, 1998. He was succeeded by Dr. Lois Mulligan. Other faculty members were Drs. Susan Cole, Samuel Ludwin, Lois Mulligan and David LeBrun (as of 01/07/98). The student representatives until July 1, 1998 were Ms Suzan Abu-Abed and Ms Kelly Wilton; Mr Kevin Weigl and Mr. Ben Matthews assumed these positions for the 1998/99 academic year. The Committee met on a monthly basis to make decisions on admissions, review student progress, review membership of Master's and Doctoral theses committees and rate and recommend students for scholarships and awards.

Thirty-three students were registered during the 1998 calendar year. Thirteen were registered in the Doctoral Programme and 20 in the Master's Programme. Four Master's students (Sarah Ely, Lee Fraser, Kelly Wilton and Kim Wynd) and two Doctoral student (David Hipfner and Jay White) successfully defended their theses in 1998. Dr. Hipfner is currently a Post-doctoral Fellow at the European Molecular Biology Laboratory in Heidelberg, Germany ; Dr. White is Manager of Operations for Cytochroma here at Queen's University. Megan Begbie and Angela Keightley successfully defended their comprehensive examinations.

For the 1998 academic year, five Department of Pathology graduate students were awarded Ontario Graduate Scholarships: Suzie Abu-Abed, Chris Davidson, Sarah Ely, Yotis Senis and Chris Udell. Queen's Graduate Fellowships were awarded to Lee Fraser, Deborah Greer and Dawei Zhang. MRC Studentships were held by Megan Begbie and Angela Keightley, both graduate students in David Lillicrap's laboratory. Dr. Kirsty Tompkins was totally funded by a J.A. Stewart Scholarship.

In the calendar year 1998 the Graduate Program processed approximately 175 requests for application material and/or information. About 75 of these were handled by electronic mail.

RECRUITMENT INITIATIVES:

There is an annual Department of Pathology evening for Health Sciences students held in the Fall. Also, Pathology is represented at the Life Sciences careers evening in January. In 1998, many 3rd and 4th year students indicated their interest in 4th year projects or graduate studies at the Fall Pathology orientation evening. In addition, the Department has a limited budget to invite excellent students to visit the Department from other centres. Together, these initiatives have improved the profile of the Department of Pathology in the Life Sciences programme and recruitment for graduate studies.

OUTREACH:

During the past year, several outreach initiatives involving graduate students and Faculty members in the Department have continued. Some students as well as some members of the Department have been involved in a Cancer Conference presented to some of the local public schools. This programme is organized by faculty and students in the Departments of Oncology, Biochemistry and Pathology. In addition, interested graduate students have been involved as judges for the Frontenac Lennox & Addington Science Fair. The Department of Enrichment Studies offers a Pathology course for gifted high school students across Canada. In the past, these two one-week sessions have run in April/May and offered high school students a good overview of Pathology.

GRADUATE STUDENT PRESENTATIONS:

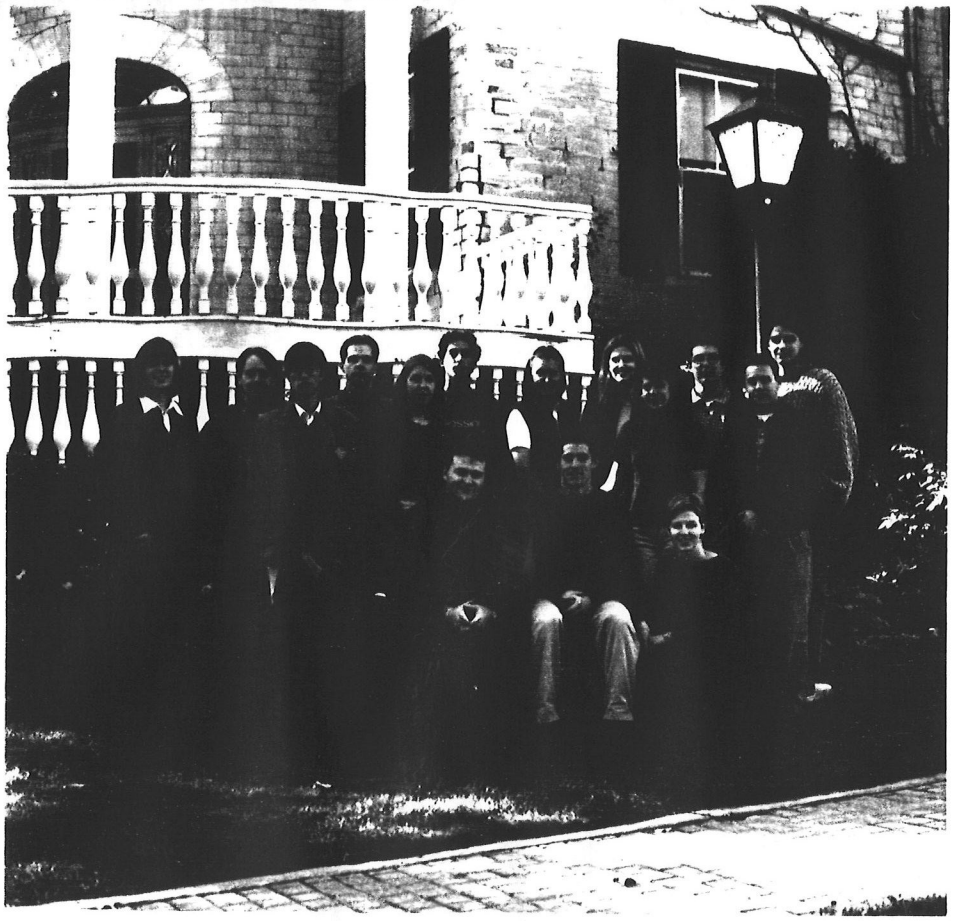
Graduate students were honoured by invitations to present their research at national/international conferences. These are outlined below:

Megan Beg	40th Annual Meeting American Society of Hematology, Miami Beach, Florida, December 1998 "Bacterial lipopolysaccharide-induced transcriptional activation of the F.VIII promoter is mediated through C/EBP-NFKB interactions"
Sarah Ely	Serum Amyloid A: Amyloidosis to Atherosclerosis Gordon Research Conference, Henniker, New Hampshire, June 1998 "Effect of SAA on activity of ACAT"
Jin Gu	89th Annual Meeting of American Association for Cancer Research, New Orleans, Louisiana, March 1998 "Identification of paracrine and possible autocrine hepatocyte growth factor loops in breast and non-small cell lung carcinomas"
Angela Keightley	1998 Annual Meeting American Society of Hematology, Miami Beach, Florida "Variation at the von Willebrand factor gene locus is associated with plasma vWF:Ag levels: identification of three novel single nucleotide polymorphisms in the vWF gene promoter"
Leah Yo	89th Annual Meeting of American Association for Cancer Research, New Orleans, Louisiana, March 1998 "A comparison of *MDR1, MRP, cMOAT, MRP3, MRP4* and *MRP5* in a panel of unselected SCLC and NSCLC cell lines.

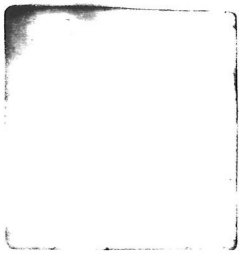
RESEARCH SEMINAR SERIES

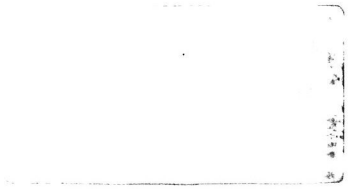
The Department of Pathology Research Seminar Series is held every Tuesday during the academic year in Richardson Amphitheatre at 4:00 p.m. Speakers include Graduate Students, Pathology Faculty, and invited speakers from both within and outside of Queen's University. The following seminars were presented by graduate students in 1998

Ms. Suzie Abu-Abed	Mouse P450RAI
Ms. Megan Begbie	Molecular Mechanisms of the Factor VIII Acute Phase Response
Ms. Sarah Ely	Potential Function of Serum Amyloid A in Cholesterol Metabolism during Inflammation
Mr. Lee Fraser	Genomic Instability is Associated with Defects in a Novel DNA Repair Pathway
Mr. Mian Gao	Structure and function Analysis of Human Multidrug Resistance Protein, MRP: Domain Interactions and ATP Hydrolyses



Left-Right (Back) Leah Young, David Hipfner, Chris Udell, Brian Brown, Adina Vultur, Angela Keightley, Lee Fraser, Bob St. Onge
(Ctre) Jin Gui, Deborah Greer, Meg Begbie, Kevin Weigl
(Front) Carla Cuthbert, Jordan Hansford, Ben Matthews, Jennifer Struthers





Mr. Jin Gui	Identification and possible function of an autocrine hepatocyte growth factor loop in breast and non-small cell lung carcinoma
Mr. David Hipfner	Structural and functional analysis of MRP using monoclonal antibodies
Ms. Angela Keightley	Variation at the VWF gene locus is associated with plasma VWF:Ag levels: identification of three novel single nucleotide polymorphisms in the VWF gene promoter
Ms. Chunyan Li	During acute inflammation *in vivo* does SAA influence splenic cholesterol efflux?
Mr. Greg Lo	Subcellular Targeting of Multidrug Resistance Protein (MRP) and its Related ABC Transporter, MRP2
Mr. Ben Matthews	Characterizing the Cellular Effects of the Oncoprotein E2A PBX1
Mr. R. St. Onge	The human G2 checkpoint complex
Ms. Kirsty Tompkins	Genetic variation in the von Willebrand factor and Platelet Glycoprotein Ib Genes: Possible Role in Atherosclerosis
Mr. Chris Udell	HRAD1 is a Human Homologue of the Fission Yeast Rad 1 + cell Cycle Checkpoint Control Gene
Mr. Kevin Weigl	Topology Studies of the Multi-drug Resistance Protein
Ms. Kelly Wilton	The Effect of F.IX Promoter Mutations on Recovery from Hemophilia B Leyden; Finding a Model Cell Line for in vitro Studies
Ms. Kim Wynd	Conjugated Adenovirus/DNA Gene Delivery Utilized for the Evaluation of F.VIII Promoter Elements
Ms Leah Young	Expression of MRP-related genes in lung cancer

GRADUATE COURSES

The following graduate courses are offered in the Department of Pathology:

Cancer Biology - Pathology 823

This course is co-ordinated by Dr. Bruce Elliott. Essential questions in clinical and basic oncology are introduced and discussed. The course is offered in alternate years. In 1998, 14 students were enrolled.

Graduate Pathology for Non-Medical Students - Pathology 824/410

The course co-ordinator is Dr. John Rossiter. This course provides a general introduction to the pathological processes involved in common human disease. The course is offered annually in the Fall. Four graduate students were enrolled in the Fall term of 1998.

Human Genetics - Pathology 825

The course co-ordinator is Dr. Lois Mulligan. Molecular mechanisms responsible for human disease are discussed with examples of diagnostic studies. The course is offered in alternate years in the Winter term. In the Winter term of 1998, 6 students were enrolled.

The Molecular Basis of Disease - Pathology 826

The course co-ordinator is Dr. Robert Kisilevsky and Dr. Lillicrap. This graduate course is offered alternate years and was run for the first time in the Winter term of 1995 Enrolment in 1997 was 12. The course reviews in detail the pathogenic details of four specific areas of tumour disease.

DEPARTMENT OF PATHOLOGY GRADUATE STUDENTS 1998

Student Name	Program	Start Date	Supervisor
Abu-Abed, Suzan	MSc/PhD	01/97 / 09/98	Dr. Petkovich
Almquist, Kurt	PhD	09/95	Drs. Cole/Deeley
Begbie, Megan	PhD	01/97	Dr. Lillicrap
Brown, Brian *	MSc	09/98	Dr. Lillicrap
Cuthbert, Carla	PhD	09/94	Dr. Lillicrap
Davidson, Chris	PhD	09/97	Dr. Kisilevsky
Ely, Sarah	MSc	09/96	Dr. Kisilevsky
Fraser, Lee	MSc/PhD	09/95 / 09/98	Dr. Mulligan/Dr. Davey
Gao, Mian	PhD	09/97	Drs. Deeley/Cole
Greer, Deborah *	MSc	09/98	Dr. Davey
Gui, Jin	PhD	09/96	Dr. Elliott
Hansford, Jordan *	MSc	09/98	Dr. Mulligan
Hipfner, David	PhD	09/93	Dr. Cole/Dr. Deeley
Keightley, Angela	PhD	01/96	Dr. Lillicrap
Kim, Dennis	MSc	09/95	Dr. Greer
Li, Chunyan	MSc	09/96	Dr. Kisilevsky
Lo, Greg	MSc	09/97	Dr. Deeley
Martens, Lawrence	PhD	05/97	Dr. Mulligan
Matthews Ben	MSc	09/97	Dr. LeBrun
Senis, Yotis	PhD	05/96	Dr. Greer
St. Onge, Bob	MSc	09/97	Dr. Davey
Struthers, Jennifer *	MSc	09/98	Dr. Khalifa
Tompkins, Kirsty *	MSc	09/98	Dr. Lillicrap
Udell Chris	MSc	05/97	Dr. Davey
Vultur, Adina *	MSc	09/98	Dr. Raptis
Weigl, Kevin	MSc	09/97	Dr. Cole
White, Jay	PhD	05/096	Dr. Petkovich
Wilton, Kelly	MSc	09/96	Dr. Lillicrap
Wong, Joyce	MSc	01/93	Dr. Giles
Wynd, Kelly	MSc	09/96	Dr. Lillicrap
Young, Leah	PhD	09/94	Dr. Gerlach/Dr. Campling
Zhang, Dawei *	PhD	09/98	Dr. Deeley

* New students for 1998/99

Updated: March 4, 1999

POSTGRADUATE

Dr. David Hurlbut is the Director of the Postgraduate Education Program in the Department of Pathology and also the Director of the General and Anatomic Pathology Programs. Dr. Samuel Ludwin is the Director of Neuropathology and Dr. Lois Shepherd is the Director of Hematopathology. Ms. Barbara Saunders is the Administrator of the Postgraduate Education Program in the Department.

Resident Appointments

July 1, 1997 - June 30, 1998

Dr. Konrad Chan	PGY-4 (RIII)	General Pathology
Dr. Navdeep Gill	PGY-4 (RIII)	General Pathology
Dr. Plamen Kossev	PGY-6 (RV)	Anatomic Pathology
Dr. David Kydd	PGY-5 (RIV)	Neuropathology
Dr. Michael Rutherford	PGY-4 (RIII)	Anatomic Pathology
Dr. Richard Yu	PGY-5 (RIV)	General Pathology

PGY-1 Appointments (Clinical Internships)

There are no PGY-1 appointments for this period.

July 1, 1998 - June 30, 1999

Dr. Konrad Chan	PGY-5 (RIV)	General Pathology
Dr. Tim Childs	PGY-2 (RI)	General Pathology
Dr. Navdeep Gill	PGY-5 (RIV)	General Pathology
Dr. Michael Rutherford	PGY-5 (RIV)	Anatomic Pathology
Dr. Jason Sack	PGY-2 (RI)	General Pathology

POSTGRADUATE STUDIES (cont'd...)

Awards

M. Rutherford	Dr. Robert S.A. Prentice Annual Prize for best presentation by a pathology resident at Queen's University.
M. Rutherford	Canadian Society for Clinical Investigation and Medical Research Council of Canada: Award for Excellence in Resident Research, 1998.
	Recipient of the 1st Annual W.E.N. Corbett Prize for residents for Diagnostic Excellence in Clinical Pathology.

Conferences (Pr - presentation paper and Po - poster)

K.K-Y. Chan & M.E. Treloar	Development of Stool Examination Criteria for Investigation Diarrhea in a Community Hospital, OAP Meeting, London, 1998. (Pr)
K.K-Y. Chan, D. Hurlbut & S. Ford	Cecal Adenocarcinoma Presenting with Meningeal Carcinoma Cell Component: A Case Report, CAP Meeting, Toronto, 1998. (Pr)
K.K-Y Chan & L. Shepherd	Blood Transfusion Utilization in Elective Total Hip Replacement Post-Krever Era. Can. Society of Transfusion Medicine, Ottawa, 1998. (Po)
N. Gill & L. Tomalty	QA audit of Intravascular Line-Tip Culture Results. CACMID Meeting, Toronto, 1998. (Po)

Publications

Michael N. Rutherford and D. LeBrun. Restricted Expression of E2A Protein in Primary Human Tissues Correlates with Proliferation and Differentiation. American Journal of Pathology, 153:165-173, 1998.

Michael Rutherford, G.R. Bayly, B.P. Matthews, T. Okuda, W.M. Dinjens, H. Kondoh, D.P. LeBrun. The Leukemogenic Transcription factor E2A-Pbx1 Induces Expression of the Putative N-Myc Target Gene Ndr-1 in Lymphoid Cells. Blood 92:Suppl 1, 590a. (Abstract)

SENIOR STAFF COMMITTEES

SENIOR STAFF COMMITTEES

Dr. S. Boag: Member, Laboratory Information System Prioritization Group, KGH; Member, Kingston Regional Cancer Centre Lung Site Group, KGH; Pathology Rep, Lung Tumour Board, KGH; Head, Pathology & Lab Medicine Network, Cancer Care Ontario Southeastern Regional Council; Flock Worker's Lung Study Group, National Institute of Occupation Safety and Health Centres for Disease Control, USA.

Dr. S. Cole: Member, Faculty Research Advisory Committee, Queen's; Member, Pathology Graduate Studies Committee; Member, Pathology Search Committee; Member, Pathology Appointments, Promotions, Tenure and Continuing Appointments Committee

Dr. C. Collier: Instructional Development Center, "Teacher/Scholar Network" Group; Member, Faculty of Medicine Admissions Committee; Member, Faculty of Medicine TIPS; Coordinator, Journal Club; Coordinator, Clinical Chemistry Review Sessions; Member, Division of Clinical Laboratory Staff Meeting, KGH; Member, Pathology Staff Meetings, Queen's; Member, Postgraduate Education Committee.

Dr. R. Deeley: Chair, Cancer Research Laboratories; Member, Research Advisory Committee, KGH; Research Director, KRCC; Member, Executive Management Committee, KRCC; Research Coordinator, CCORCC; Member, Committee for Promotions, Tenure and Reappointment, Oncology.

Dr. G.J. Delisle: Member, Faculty of Health Sciences Evaluation Task Force; Chair, Undergraduate Medical Microbiology, Faculty of Health Sciences; Member, Infection Control Committee KGH; Member, Pharmacy and Therapeutics Antimicrobial use Subcommittee, KGH: Member, Clinical Laboratory Meeting, KGH; Member, Clinical Microbiology Meeting, KGH; Director, Clinical Microbiology Laboratories, KGH/HDH; Member, Department of Microbiology & Immunology Meetings; Member, Pathology Staff Meetings.

Dr. D. Dexter: Member, MD Finance Committee; Member, General Pathology Residency Program Committee; Member, Anatomic Pathology Residency Program Committee; Member, Subcommittee for Core, Rapid Response, and Specialty Laboratories; Member, CLEO Management Group; Member, Comprehensive Planning Subcommittee of the Board, KGH; Founding Member, Special Resources Committee - Le Royers Patrons, KGH; Director, Point of Care Testing, KGH/HDH; Member, Ambulatory Clinics Committee, KGH/HDH.

Dr. B. Elliott: Council Member, Graduate School, Queen's; Member, Organization Committee for Research Day for Graduate Students and Clinical Residents, Faculty of Health Sciences; Member, Selection Committee for Head, Division of Surgical Oncology; Member, Patient and Public Education Committee, Oncology; Chair, Graduate Studies Committee; Member, Graduate Studies Committee; Member, Advisory Research Committee; Member, Promotion, Reappointment, Tenure and Continuing Appointment Committee, Pathology; Life Sciences Representative for Pathology, Life Sciences; Coordinator, Flow Cytometry & Confocal Microscope Facility, Cancer Research Labs.

Dr. A. Fletcher: Member, Nominating Committee, Faculty of Health Sciences; Member, Quality and Utilization Improvement Committee; Member, Continuing Education Committee, KGH; Chair, Q.A. Committee, KGH.

Dr. S. Ford: Member, Counselling and Disability Advisory Council; Assistant Dean, Student Affairs, Faculty of Health Sciences; Member, Faculty of Health Sciences Promotions Committee; Member, Undergraduate Education Committee, Faculty of Health Sciences; Member, PBL Committee; Member, Faculty Student Awards & Bursaries Committee; Member, Faculty J.D. Hatcher Awards Committee; Reviewer, Hannah Chair; Reviewer, Psychiatry Program; Chair, Hepatitis B Ad Hoc Committee; Director Autopsy Services, KGH; Member, Morgue Security Procedures Committee, KGH; Member, Undergraduate Education Committee, Pathology; Member, Promotions, Reappointments, Tenure and Continuing Appointments Committee, Pathology.

Dr. A. Giles: Member, Technology Transfer Board, Queen's.

Dr. P. Greer: Member, Research Advisory Committee, Kingston Regional Cancer Centre.

Dr. K. Harrison: Member, Pathology Staff Meeting; Member, KGH Staff Meeting; ACHE sign out, KGH Biochemical Genetics Laboratory.

Dr. D. Hurlbut: Program Director, Anatomical & General Pathology Residency Program Committees; External member, GI Residency Training Program Committee; Ont. Gut Club Meeting.

Dr. R. Kisilevsky: Member, Advisory Committee on Selection of Head, Anesthesia; Board Member, University Club; Member, Faculty Board; KGH Staff Meetings; Queen's Staff Meetings; Member, CCC; Member, Research Advisory Committee.

Dr. D. LeBrun: Member, Faculty Board; Member, Clinical Teachers Association; Member, Division of Haematology (Internal Medicine); Member, Phase I Meeting; KGH Staff Meetings; Member, Anatomic Pathology Committee; Member, Medical Mortality Conference, Member, Hematopathology Division Meetings; Medico-legal Rounds; Morphology Rounds, Gross, Conference, Completed Case Conference, Member, Graduate Studies Committee; Member, Internal Review of Pathology Programs; Member, Richardson Lab Research; Queen's Staff Meeting.

Dr. D. Lillicrap: Co-Director, KGH DNA Laboratory; Member, Blood Utilization Committee, KGH; Member, Research Advisory Committee, KGH; Chair, Research Advisory Committee, Pathology; Member, Promotion, Reappointment, Tenure and Continuing Appointments Committee.

Dr. S. Ludwin: Member, University Postgraduate Education Committee; Member, SEAMO Staffing Committee; Chairman, Faculty Board; Member, Faculty Council; Medical Director, KGH; Member, KGH Medical Advisory Committee; Member, KGH Planning Steering Committee; Member, Fiscal Advisory Committee; Chairman, KGH Credentials Committee; Member, Bioethics Committee, KGH; Member, Department of Pathology Postgraduate Education Committee; Director, Neuropathology Training; Member, Department of Pathology Graduate Committee; Member, Departmental Finance Committee; Member, Pathology Undergraduate Committee.

Dr. P.N. Manley: Pathologist-in-Chief, HDH/KGH; Chairman, Dept. of Pathology, Queen's; Member, Graduate Committee; Member, Research Advisory Committee; Member, Faculty Council; Member, Faculty Board; Member, SEAMO Governing Committee; Member, SEAMO Finance Sub-Committee; Member, Basic Science Heads; Member, Council of Clinical Heads; Member, School of Medicine Council; Member, Medical Advisory Committee; Member, Medical Advisory Budget Review Committee; Member, Council of Department Heads; Member, CLEO Meetings; Member, Lab. Admin. Management Committee; Member, Anatomic Pathology Senior Staff Meetings; Chairman, KGH Staff Meetings; Chairman, Departmental Search Committee; Chairman, MD Compensation Committee Meetings.

Dr. D.H. Maurice: Chair, Molecular Biology for the Life Sciences Students Committee; Member, Department of Pharmacology/Toxicology Staff Meetings; and Member, Pathology Staff Meetings; Member, Pathology PRTCA Committee.

Dr. D. Rapson: Chair, Hemostasis Committee; Member, Hematopathology Division; Member & Vice Chair, Pediatric Oncology Program Committee, KRCC; Member, Hematology Residency Training Committee; Contact Person, Observership of 1st year medical students, KRCC; KGH & Queen's Pathology Staff Meetings.

Dr. M. Raymond: Chief, KGH Clinical Chemistry; Member, KGH Information Systems Steering Committee; Chair, KGH Isotope Committee; KGH Staff Meetings; Queen's Pathology Staff Meetings; Pathology Finance Committee; LIS Prioritization Committee; LIS Specification Committee.

Dr. J.P. Rossiter: Co-ordinator, Department of Pathology Library; Member, Neuropathology Residency Training Committee; Member, Phase I Curriculum Development Committee; Member, Neurology Residency Training Committee; Pathology Staff Meetings, KGH/Queen's.

Dr. C. Rowlands: Laboratory Medical Director, Perth & Smiths Falls Community Hospital; Director, Cytology, KGH/HDH; Member, Faculty Admissions Committee; Director, Cytology, KGH; Staff Meetings, Queen's/KGH.

Dr. S. SenGupta: Medical Director, Kingston Hospitals CLEO; Member, Interview Team, School of Medicine Admission Process; Member, Phase II Musculoskeletal Course Committee; Member, KGH/HDH Combined Ambulatory Care Committee; Member, KGH/HDH Medical Advisory Committee; Member, Ongwanada Hospital Medical Advisory Committee; Member, Infection Control Committee, Ongwanada; Member, Regional Laboratory Services Planning Group; Member, Pathology Finance Committee; Queen's/KGH/HDH Staff Meetings.

Dr. L. Shepherd: Director, Clinical Immunology Lab; Director, Postgraduate Education Committee; Chair; Internal Review Committee, RCPS Accreditation; Coordinator, Internal Review Committee, RCPSC GP, AP Programs; Interviewer, Medical School Admissions; Mentor, Medical School; Member, Joint Practice for Transplantation and Organ Procurement; Member, Joint Hospital Advisory Committee on HIV Notification of Blood Recipients; Chair, Advisory Committee on Transfusion Medicine; Member, Division of Hematology; Member, Training Committee, Fellowship Program in Clinical Hematology; Member, Hematological Path Training Program; Chair, Consolidated Division of Hematology; Member, Coordinating Committee Post Graduate Education; Member, Anatomical Pathology Training Committee; Member, PRTCA Committee; Ad Hoc Search Committee, Hematopathology; Member, Core lab Working Group; Member, Tissue & Tumour Block Retrieval Committee; Member, QA Committee.

Dr. S. Taylor: Co-Director, KGH DNA Laboratory; Member, Biohazard Safety Committee; Member, Kingston Regional Cancer Centre Research Committee; Member, Kingston Regional Cancer Centre Program; Queen's/KGH/HDH Staff Meetings.

Dr. L. Tomalty: Chair, University Biohazard Committee; Member, Technology in Learning Committee; Coordinator, Phase IIA, Faculty of Medicine; Member, Undergraduate Medical Education Committee; Member, Infection Control Committee; Member, Antibiotic Use Subcommittee; Associate Director, Department of Medical Microbiology; Member, Administrative Committee, Department of Medical Microbiology; Representative, Graduate Council, Microbiology and Immunology; Member, Pathology Postgraduate Education Committee; Member, Quality Assurance Committee.

Dr. S. Wasan: Coordinator, Pediatric Pathology Conference.

Dr. I. Young: Chair, Departmental PRTCA Committee; Director, Division of AP.

Dr. D. Zoutman: Chair, KGH/HDH Joint Infection Control Committee; Member, Joint KGH/HDH Antibiotic Utilization Committee; Member, KGH Standing Committee on Environmental Management; Member, SMOL Professional Advisory Committee; Member, Microbiology Laboratory Management Committee.