QUEEN'S UNIVERSITY
DEPARTMENT OF PATHOLOGY

FACULTY OF MEDICINE
ANNUAL REPORT
1996

DR. PAUL MANLEY, M.D. - CHAIRMAN

DEPARTMENT OF PATHOLOGY
1996
ANNUAL REPORT

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(Report written March 1997)

FACULTY, ADMINISTRATION
AND
LABORATORY MANAGERS AND SUPERVISORS

DEPARTMENT OF PATHOLOGY
FACULTY

1996-97

PROFESSOR AND HEAD	Dr. Paul Manley
PROFESSORS	Dr. A.F. Clark*
	Dr. S. Cole
	Dr. W.E.N. Corbett (Retired June 30, 1996)
	Dr. R. Deeley
	Dr. G. Delisle*
	Dr. A.M.V. Duncan
	Dr. B. Elliott
	Dr. A.R. Giles
	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 (0.5 part-time)
	Dr. P. Greer
	Dr. L. Mulligan*
	Dr. M. Petkovich*
	Dr. L. Raptis*
	Dr. M. Richardson
	Dr. L. Tomalty
	Dr. S. Wasan
	Dr. I. Young
ASSISTANT PROFESSORS	Dr. A.S. Boag
	Dr. C. Collier
	Dr. S. Davey*
	Dr. G. Evans*
	Dr. D. Hurlbut
	Dr. M. Khalifa*
	Dr. D. LeBrun
	Dr. D. Maurice
	Dr. C. Mueller*

ASSISTANT PROFESSORS
(cont'd)

Dr. M. Raymond
Dr. J. Rossiter
Dr. C. Rowlands
Dr. S. SenGupta
Dr. L. Shepherd
Dr. S. Taylor
Dr. D. Zoutman

LECTURER

Dr. J. Raymond
Dr. D. Rapson

ADJUNCT ACADEMIC GROUP I

Dr. S. Birse
Dr. M. Gaber
Mr. L. Kennedy
Dr. D.M. Robertson, Emeritus
Dr. J. Samis
Dr. M. Schunk - retired July 12, 1996
Dr. G. Twemlow

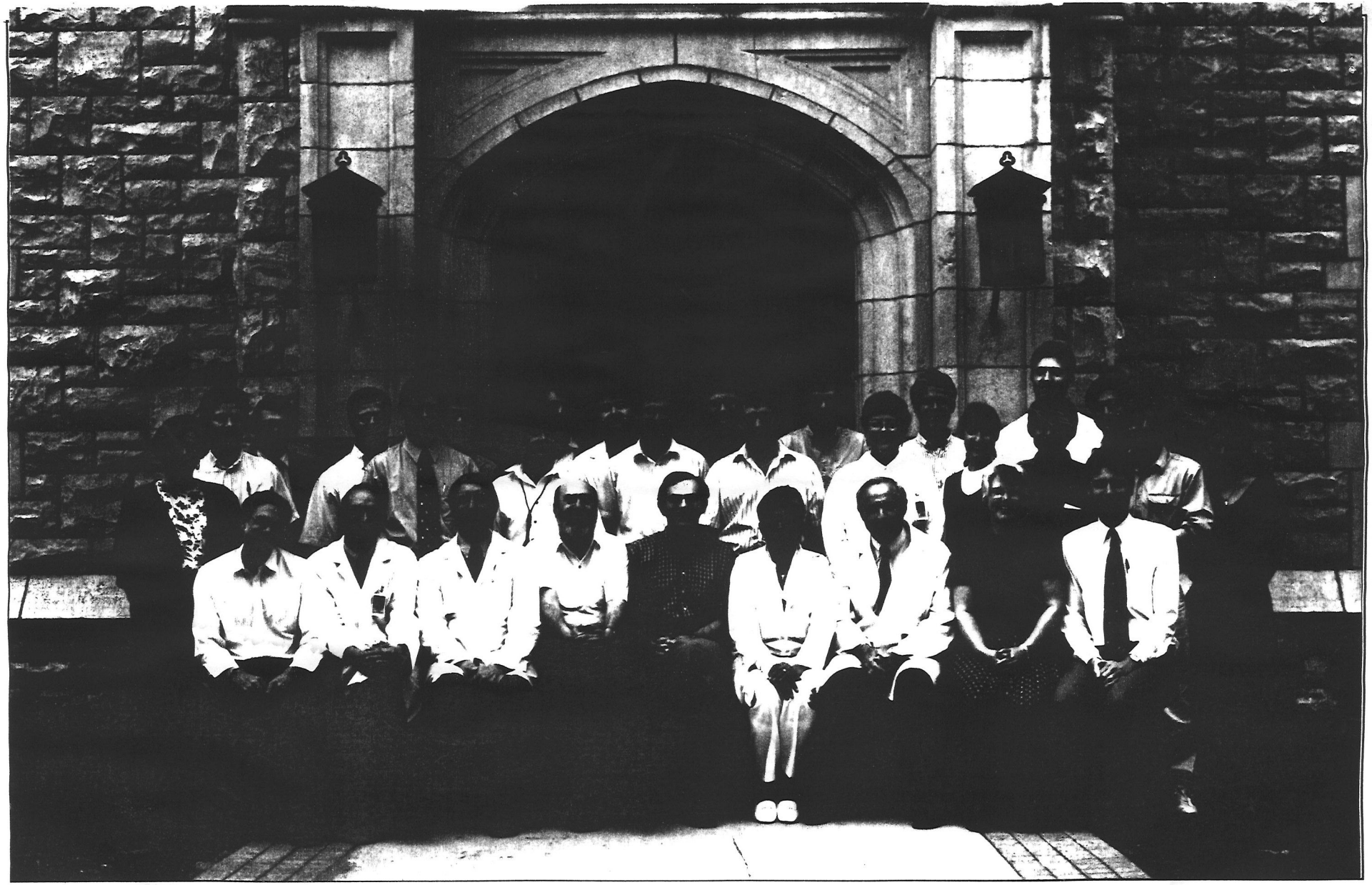
ADMINISTRATION

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

LABORATORY MANAGERS AND SUPERVISORS

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

***Cross-Appointed Staff**



May 1996

Back Row: (From left to right) - S. Boag, D. Piper, I. Young, R. Yu, J. Gray (summer student), C. Yang, D. Kydd, D. Lillicrap, D. LeBrun, C. Borth, (summer student) N. Gill
Middle Row: - C. Collier, D. Zoutman, C. Rowlands, J. Rossiter, L. Kennedy, J. Raymond, S. Taylor, J. Vu, P. Kossev, T. Pringsheim (summer student)
Front Row: - B. Elliott, M. Raymond, W. Corbett, R. Kisilevsky, P. Manley, S. Wasan, S. Ludwin, S. Ford, D. Hurlbut

SIGNIFICANT EVENTS
DEPARTMENT OF PATHOLOGY
1996

MONBUSHO VISITING PROFESSORSHIP

Dr. Susan Cole was awarded a visiting professorship at Kyushu University in Japan.

AMERICAN ASSOCIATION FOR CANCER RESEARCH

Dr. Susan Cole was elected to the Board of Directors.

PATENT OFFICE

Dr. Susan Cole and Dr. Roger Deeley were issued patents by the U.S., Australia and Japan (pending) Patent Offices on Multidrug Resistance Protein on February 6, 1996.

PRIZE FOR EXCELLENCE IN RESEARCH

Dr. Robert Kisilevsky was awarded a Queen's University Prize for Excellence in Research.

PRIX D'EXCELLENCE

Dr. Robert Kisilevsky received the Prix d'Excellence - Calude P. Beaubien award presented by the Alzheimer's Society of Canada.

ONTARIO HEART AND STROKE FOUNDATION

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

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.

NEUROCHEM

Dr. Robert Kisilevsky is the lead investigator of a group which received $14 Million venture capital funding from Neurochem for 3 years starting September 1996.

INTERNATIONAL SOCIETY OF THROMBOSIS AND HEMOSTASIS

Dr. Alan Giles was appointed Chair, Working Party on "The Monitoring of Low Molecular Weight Heparin" for Scientific and Standardization Committee on Anticoagulation of the International Society of Thrombosis and Hemostasis.

FACULTY OF MEDICINE

Dr. Sally Ford has been appointed Assistant Dean for Student Affairs for a term of July 1, 1996 to June 30, 1999.

MICHAEL SCHUNK

Dr. Michael Schunk resigned from his position at Queen's effective July 12, 1996 and has accepted a new position with Connaught Labs in Toronto.

RETIREMENTS

Dr. W.E.N. Corbett retired June 30, 1996, after 33 years with the department.

Mr. Ed Tyerman retired November 30, 1996, after 241/2 years with the department.

CHICA-Canada

Dr. Dick Zoutman has been elected to the position of Physician Director on the Board of Directors of the Community and Hospital Infection Control Association - Canada, for a three year term starting January 1997.

LABORATORY MEDICINE AND PATHOLOGY

LABORATORY MEDICINE AND PATHOLOGY

The nature of Pathology as a discipline is special, as the subject 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, in that 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; at the same time it is 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, while at the same time taking into consideration the unique features offered by the local Queen's and regional environments. Of great importance in achieving this aim 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 dissention 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 Vision Statement elaborated by the new Dean of Medicine.

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 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 countryfaces tremendous challenges due to the recent 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 $2.7 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. Together this forms an important component of the hospital budget and functioning. There is a complex administrative structure, which has traditionally encompassed 2 separate hospitals. With the restructuring taking place in the city of Kingston, within a few months this will be simplified with the formation of a single Department to be sited primarily at Kingston General Hospital. 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 has been started with the introduction of the Clinical Laboratories of Eastern Ontario Regional Programme. This has been a landmark initiative, 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, which is proving 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 new 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.

DEPARTMENT OF PATHOLOGY AND

DIVISION OF CLINICAL LABORATORIES

ANNUAL REPORT, FEBRUARY 1997

PREAMBLE

The Department of Pathology at Kingston General Hospital is:

a) a medical department reporting through the Medical Advisory Committee

b) the Division of Clinical Laboratories reporting through the Operations Executive

Our major function is to provide useful answers to clinical inquiries by performing laboratory testing for patients in a reliable and timely fashion, and when appropriate, providing interpretation or diagnosis of test results. We thus derive both our work and our strength from clinical departments.

Pathologists differ from most clinicians both in our authority and responsibility for the management of operational and capital budgets and of a large number of technical staff, and for our status as salaried employees. We are required to be competent middle level executives as well as clinical consultants and scholars.

FUNCTION AND SERVICES PROVIDED

a) Provision of accurate, useful and timely laboratory information to Clinical Services within the hospital;

b) Clinically related and basic research;

c) Teaching:
- Pathology resident staff and Queen's Medical, Arts & Science, Graduate, Nursing and Rehabilitation Science students
- Clinical staff and their residents through interdepartmental conferences and quality assurance rounds such as Medical, Surgical and Pediatric Mortality conferences
- Medical technologists from St. Lawrence College
- Cytotechnologists from the Michener Institute for Applied Sciences
- Fellows in Molecular Genetics and Cytogenetics
- Technologists from DNA Technology at Michener Institute

d) Direct management of area hospital laboratories - Napanee, Picton, Perth/Smiths Falls, St. Mary's, Ongwanada and MDS-Kingston;

e) Eastern Ontario Reference Laboratory - above hospitals and Hotel Dieu Hospital, Belleville, Brockville, Cornwall, Trenton, Ongwanada and Winchester;

f) Extramural professional consultations.

g) Forensic Pathology consultations.

h) Community laboratory with HDH in conjunction with the Hospitals-in-Common Laboratory, Napanee and Perth/Smith Falls.

i) Kingston General Hospital is the National Reference Laboratory for hemostasis testing for the Association of Hemophilia Centre Directors of Canada and is providing surveillance information to the Canadian Blood Agency via that role.

CLINICAL LABORATORIES OF

EASTERN ONTARIO

(CLEO)

1996 ANNUAL REPORT

During a year of unprecedented change, re-engineering and re-structuring of the way that laboratory services are delivered, CLEO managed to continue providing exemplary outreach service to its existing clients and set the framework for growth into new markets. Listed below is a summary of achievements and set-backs for the calendar year 1996.

1. Nearly two years after successfully outbidding its competitor for the contract for reference laboratory services CLEO began providing services to both Perth and Smiths Falls sites as of May 1996. Remote reporting, intra-operative consultations (frozen section diagnoses for breast tumours), on-site technical consultations (eg. in microbiology) have been some of the value-added services that have been provided to our new/old clients.

2. With the retirement of their incumbent laboratory director, CLEO was approached in December 1996 by Ongwanada to provide medical direction to their laboratory in addition to the reference testing that has been provided to them for several years. A contract was signed and became effective January 1, 1997.

3. CLEO initiated a regional purchase opportunity for a basic coagulation testing analyzer for its community hospital clients. This included collecting information from clients regarding their needs, coordinating vendor demos, continuing education sessions and RFP's. Although this initiative did not result in an actual group purchase (due to differing client needs) the effort was felt by all participants to be worthwhile.

4. The Regional Hemostasis Monitoring Program, while still in its conceptual stage, moved forward in terms of software and hardware development and purchase. It is hoped that the program will go live in 1997 as a pilot project in either Napanee or Picton.

.../2

Reception Laboratories and Office:
Kingston General Hospital 76 Stuart Street, Kingston, Ontario
Canada K7L 2V7
• Telephone: (613) 548-1332 • Fax: (613) 548-2513 • E Mail: CLEO@cliff.path.queensu.ca •

5. The Outreach Program moved its reception desk into the Core Lab, as part of ongoing re-engineering and consolidation activities in the Kingston hospital laboratories. These changes have not had any untoward effects on client relationships and in fact have resulted in smoother workflow in the main lab, while simplifying off-hours delivery of specimens.

6. CLEO was invited in the late fall to Almonte by the hospital administration to discuss laboratory services in the area. This meeting formed the basis for the submission of a joint formal proposal with Perth and Smiths Falls District Hospital for the provision of reference testing for Almonte General Hospital (February 1997).

7. New regulations were introduced in 1996 by the provincial government which affected one of CLEO's major partners, Hospitals-in-Common-Laboratories (HICL). While community specimen collection centres in Napanee and Perth were granted further on-going funding (and thereby permitting hospital laboratories in those communities to remain viable), the news for Kingston was discouraging.• As of January 1, 1997 the Kingston hospitals can no longer be reimbursed for interpreting Pap smears and skin biopsies obtained from local doctors' offices. CLEO is continuing to work with HICL in developing electronic linkages with the KGH LIS in order to improve reporting and billing for lab tests.

8. CFB Kingston began sending its anatomic pathology work to CLEO (mainly Pap smears and skin biopsies).

9. CLEO ceased billing HDH for inter hospital referrals as part of consolidation of lab services between KGH and HDH.

10. The success of the CLEO program in integrating academic and community hospital laboratory services at a regional level was the subject of a paper which was accepted for publication in Clinical Laboratory Management Review. In addition, CLEO was the focus of poster and platform presentations at CLMA, OSMT and OHA meetings.

The role of CLEO will continue to evolve over the next couple of years, partly due to significant external forces such as implementation of the provincial Laboratory Services Review. Regionally, the Laboratory Services Task Force (under the auspices of the Health Care Network of Southeastern Ontario) which began its mandate in

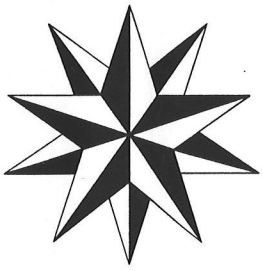
.../3

May 1996 is examining options for closer integration of hospital and community laboratory services. CLEO's Medical Director is an active member of this Task Force and has brought forth ideas and issues of concern to its clients. Through all of the discussion about restructuring regional laboratory services, CLEO is grateful for the strong support that it has received from several of its long time clients/partners concerning its wide range of excellent services (particularly providing on-site and telephone technical assistance and continuing education). These services are clearly greatly valued and should remain an integral aspect of a regional system. A regional coordinating role, such as the one played by CLEO, will continue to be essential to ensure that high quality laboratory services and expertise are available in all communities throughout Southeastern Ontario.

Prepared by:

S.K. SenGupta, M.D. and J.D. More, M.P.A.
30 April 1997

PERSONNEL, AWARDS AND SIGNIFICANT EVENTS



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ROBERT PRENTICE AWARD - RESIDENT PATHOLOGY TEACHING

Pathology Residents were pleased to present **Mr. Lloyd Kennedy** with the Robert Prentice Award for excellence in teaching.

ROBERT PRENTICE AWARD

Dr. David Kydd was the recipient of the RSA Prentice Award for the resident with the best presentation.

BIRTHS

Dr. Sandip and Smita SenGupta became the proud parents of a baby boy, Neil, born on October 30, 1996.

FACULTY OF MEDICINE

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DEPARTMENT CHRISTMAS PARTY

150 attended including past Head Dr. Nathan Kaufman & Mrs. Kaufman and past departmental member Dr. Daria and her husband Heinz Haust.

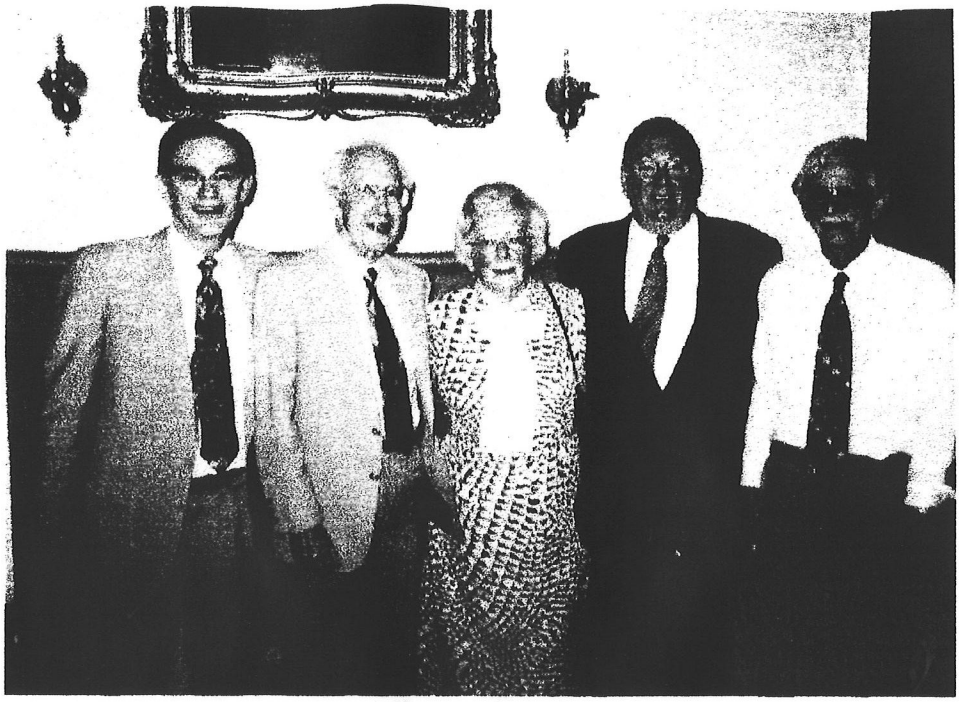
Ed Tyerman's Retirement

Farewell luncheon at the Yacht Club where Ed's friends in Pathology presented him with some lovely gifts!

Guests at the Christmas Party

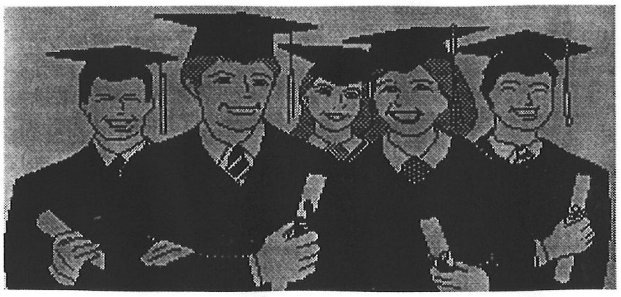
TOP: Drs. Daria Haust, Paul Manley and Katherine Manley
BOTTOM: Mrs. Kaufman, Drs. Nathan Kaufman and Bruce Elliott

This picture was taken in 1995 when Dr. Daria Haust was a Visiting Professor in the Department



Drs. Paul Manley, Nathan Kaufman, Daria Haust, David Robertson and Robert More

UNDERGRADUATE, GRADUATE AND POSTGRADUATE EDUCATIONAL PROGRAMS



UNDERGRADUATE, GRADUATE AND POSTGRADUATE EDUCATIONAL PROGRAMS

UNDERGRADUATE (Written by Mrs. Jean Guindon)

Phase I Pathology is given in the academic year from mid-November to mid-February to first year medical students. In the new medical curriculum this is the equivalent of the old General Pathology (Path 520) course. The Coordinator is Dr. Samuel Ludwin. 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 from mid-September to the end of October. Dr. SenGupta is the Coordinator and the lecturers are department residents. Enrolment runs between 50 and 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. Robert Kisilevsky is the Coordinator. Enrolment for 1996 was 62 undergraduate students and 2 graduate students. Evaluation for undergraduate students includes a mid-term and final exam. Evaluation for graduate students includes a midterm exam, final exam and a term paper.

Pathology 420 is a full credit thesis project course. Dr. David Lillicrap is the Coordinator. Department faculty members supervise students on a year long thesis project. Evaluations include a seminar presentation, an oral thesis defence and a written thesis.

Pathology 430/826 is a half credit course that is offered alternate winters beginning January 1997. Dr. Robert Kisilevsky and Dr. David Lillicrap are Coordinators. Four diseases are covered in depth, examining the molecular events leading to the development of these disorders. Enrolment is 12 with preference given to graduate students. Evaluation includes seminar presentations and written reports.

Pathology 811 is a half credit course that if offered yearly provided enrolment is sufficient. The aim of this course is to show how chromosomes are studied in relation to clinical medicine. Dr. Alessandra Duncan is the Coordinator. Please note that this course has not run since 1992.

Pathology 823 is a half credit course in cancer biology that runs alternate years in the fall term. Dr. Bruce Elliott is the Coordinator. Evaluations include a presentation, essays and a final examination.

Pathology 825 is a half credit course offered alternate years in the winter term. This course studies normal and abnormal human genetic variations. Dr. Lois Mulligan is the Coordinator. Evaluation includes seminar presentations, a grant proposal and a final examination.

GRADUATE PROGRAMME:

The Graduate Programme in the Department of Pathology is administered by the Graduate Program Committee. The Committee consists of four 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 during the current year. Other faculty members were Drs. Samuel Ludwin, David Lillicrap and Lois Mulligan. The student representatives for 1995-96 were Ms Jennifer McVeigh and Ms Jolene Brady. For the 1996-97 academic year Ms Carla Cuthbert and Mr. Jay White were nominated to these positions. 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 students were registered during the calendar year 1996. Nine were registered in the Doctoral Programme and 21 in the Master's Programme. In 1996, approximately one third of these students were externally funded from provincial and federal funding agencies, eg. MRC, OGS, United States Army, as well as the Queen's Graduate Fellowship Programme. Within the Department, four students (Kurt Almquist, Megan Begbie, David Hipfner and Angela Keightley) received MRC Studentships; one was awarded an Ontario Graduate Scholarship; one PhD student (Ron Saulnier) was the recipient of a United States Army Fellowship; and two students were successful in the Queen's Graduate Fellowship competition.

Four Master's students (Karen Ambus, Susan Armstrong, Jolene Brady and Susan Kerr) and two Doctoral students (John Ancsin and Denise Campbell) defended their theses in 1996. Denise Campbell started Medical School at the University of Toronto in September 1996 and John Ancsin has continued research in Dr. Kisilevsky's laboratory in Pathology as a Postdoctoral Fellow. David Hipfner and Leah Young successfully defended their comprehensive examinations in October and September, respectively.

In 1996 the Graduate Program processed approximately 250 requests for application material. During the last five years, there has been a significant increase in the ratio of Canadian to foreign applicants. In 1996, approximately 100 enquiries were from within Canada and 150 from other countries.

RECRUITMENT INITIATIVES:

During the past year, the Department has increased its recruitment profile in several respects. In addition to the annual Department of Pathology evening for Health Sciences students held in the Fall, Pathology is now represented at the Life Sciences careers evening in January. In 1996, at least 20 3rd and 4th year students indicated their interest in 4th year projects or graduate studies. 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 been developed. These include a lecture/tutorial programme in Pathology organized by specific graduate students in conjunction with the Queen's University Department of Enrichment Studies. In addition, 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. Finally, some students have been involved as judges for the Frontenac Lennox & Addington Science Fair.

GRADUATE STUDENT PRESENTATIONS:

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

Kurt Almquist	General Annual Meeting of the American Association of Cancer Research Conference, Washington, DC, April 20, 1996
David Hipfner	87th Annual Meeting of the American Association of Cancer Research, Washington, DC, April 20, 1996 "Identification of the epitope of multidrug resistance protein (MRP)-specific monoclonal antibody QCRL-1"
Denise Campbell	24th Annual Meeting, American Society for Photobiology. Atlanta, Georgia, June 15, 1996 "Studies of ALA-induced PpIX in Hematological Malignancies"
Jennifer Klassen	Twelfth Annual Meeting on Oncogenes, Maryland, June 18, 1996 "Evaluation of HGF and HGF-receptor (Met) expression in carcinoma"
Nader Rahimi	Twelfth Annual Meeting on Oncogenes, Maryland, June 18, 1996 "Phosphatidylinositol 3-kinase Activity is Required for Hepatocyte Growth Factor-induced Mitogenic Signals in Epithelial Cells"
Ron Saulnier	Keystone Symposia, Keystone, Colorado, January 5-11, 1996 "Integrins and Signalling Events in Cell Biology and Disease"
Jay White	FASEB Summer Conference on Retinoids, Copper Mountain, Colorado, June 23, 1996. "Identification of the Retinoic Acid Inducible All-*trans* Retinoic Acid 4-Hydroxylase"
Stacey Ivanchuk	American Society of Human Genetics Annual Conference, California,

October 29, 1996
"Expression of multiple RET splicing variants in human kidney development"

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 1996:

Stacey Ivanchuk	Expression of *Ret* Proto-oncogene in Human Kidney and Renal Tumours
Dennis Kim	In Search of Targets of Fps/Fes Protein Tyrosine Kinase
Megan Begbie	MB: Transcriptional Regulation of the F.VIII and F.IX Genes
Lee Fraser	Transcription Mapping of the Pericentromeric Region of Human Chromosome 10
Ron Saulnier	Life without Adhesion. A story on Anchorage Independent Growth and the Matrix Proteins which made it Possible
Karen Ambus	Searching for Molecular Targets of the PML/RARα Oncogene
Lawrence Martens	The Effects of ALA Photodynamic Therapy on NK Cell Function
Mian Gao	Gene Structure and Function of Human MRP
Jennifer Klassen	Does an AHGS Autocrine Loop Exist in Cancer
Scott Wright	Immunohistochemical Detection of MRP in Clinical Samples
Nader Rahimi	Hepatocyte Growth Factor in Breast Cancer: From Purification to Signal Transduction
Yotis Senis	The Effect of Thrombin Generation in Vivo on Synthesis and Secretion of vWF in Aortic Endothelial Cells
Angela Keightley	Transcriptional Regulation of Endothelial Cell von Willebrand Factor Expression
Leah Young	ABC-Transporter and Cisplatin Resistance: Characterization of the Cisplatin Resistant Small Cell Lung Cancer Cell Line H209/CP
Lawrence Martens	Exogenous-ALA Induced Protoporphyrin IX-PDT: Effects on Lymphocyte Lytic Activity
Jonathan Pollett	PAR Proteins in Differentiation and Apoptosis
Kurt Almquist	A Functional Analysis of the Multi-Drug Resistance Protein MRP
David Hipfner	Structural Analysis of MRP Using Monoclonal Antibodies
Megan Begbie	Close Encounters of the bZIP kind: Transcriptional Regulation of the F.VIII and F.IX Genes
Lee Fraser	Toward a Transcription Map of the Pericentromeric Region of Human Chromosome 10

COUNCIL OF ONTARIO UNIVERSITIES PERIODIC APPRAISAL

In July 1996, the Appraisals Committee of the Council of Ontario Universities evaluated the Master's and Doctoral programs in the Department of Pathology. Periodic appraisals of the graduate programs are undertaken at seven year intervals by the Ontario Council on Graduate Studies. A detailed brief, outlining all aspects of the Graduate Program in the Department was prepared and submitted to the School of Graduate Studies and Research in May 1996, for final submission to the Council of Ontario Universities. In February 1997, the Department was informed that the Appraisals Committee had approved the MSc/PhD Program in Pathology with an "A" rating. The next accreditation will be in 2003.

GRADUATE COURSES

The following graduate courses were offered in 1996:

Clinical Cytogenetics - Pathology 811

This course is co-ordinated by Dr. Alessandra Duncan. The course content involves both theoretic and practical aspects of chromosome analysis as it pertains to human disease. The course is offered on sufficient enrolment.

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 1996, 18 students were enrolled.

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

The course co-ordinator is Dr. Robert Kisilevsky. This course provides a general introduction to the pathological processes involved in common human disease. The course is offered annually in the Fall. Three graduate students were enrolled in the Fall term of 1996.

Human Genetics - Pathology 825

The course co-ordinator is Dr. Sherryl Taylor. 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 1996, 11 students were enrolled.

The Molecular Basis of Disease - Pathology 826

The course co-ordinator is Dr. Robert Kisilevsky. This graduate course was run for the first time in the Winter term of 1995 with an enrolment of 11. It will be offered again in 1997. The course reviews in detail the pathogenic details of four specific areas of tumour disease.

DEPARTMENT OF PATHOLOGY GRADUATE STUDENTS 1996

Student Name	Program	Start Date	Supervisor
ALMQUIST, Kurt	MSc PhD	01/93 09/95	Drs. Cole/Deeley
AMBUS, Karen	MSc	09/94	Dr. Greer
ANCSIN, John	PhD	09/90	Dr. Kisilevsky
ARMSTRONG, Susan	MSc	09/93	Dr. Mueller
BEGBIE, Megan	MSc	09/95	Dr. Lillicrap
BRADY, Jolene	MSc	09/94	Dr. Lillicrap
CAMPBELL, Denise	PhD	09/93	Dr. Kennedy
CUTHBERT, Carla	PhD	09/94	Dr. Lillicrap
FISHER, Libby	MSc	09/92	Dr. Kennedy
FRASER, Lee	MSc	09/95	Dr. Mulligan
GAO, Mian	MSc	09/95	Dr. Deeley
HIPFNER, David	PhD	09/93	Drs. Cole/Deeley
IVANCHUK, Stacey	MSc	09/94	Dr. Mulligan
KEIGHTLEY, Angela	MSc	09/93	Dr. Lillicrap
KERR, Susan	MSc	09/91	Dr. Lillicrap
KIM, Dennis	MSc	09/95	Dr. Greer
KLASSEN, Jennifer	MSc	09/94	Dr. Elliott
YOUNG, Leah	PhD	09/94	Dr. Gerlach
MARTENS, Lawrence	MSc	01/95	Dr. Kennedy
McVEIGH, Jennifer	MSc	09/94	Dr. Greer
POLLETT, Jonathan	MSc	09/95	Dr. Mueller
RAHIMI, Nader	PhD	09/92	Dr. Elliott
SAULNIER, Ronald	PhD	09/92	Dr. Elliott
SENIS, Yotis	MSc	01/94	Dr. Giles
TERICANI-TEJADA, Lorena	PhD	05/95	Dr. Elliott
WHITE, Jay	MSc	09/93	Dr. Petkovich
WONG, Joyce	MSc	01/93	Dr. Giles
WOOLTORTON, Eric	MSc	09/93	Dr. Mueller
WRIGHT, Scott	MSc	09/95	Drs. Cole/Deeley
XU, Wei	MSc	01/90	Dr. Elliott

1995/96 Graduate Students

Standing up the left side and down the right:

Dr. Bruce Elliott (Graduate Coordinator), Lee Fraser, Angela Keightley, Kurt Almquist, David Hepfner, Jolene Brady, Leah Young and Dr. Chris Mueller

Starting at the bottom, sitting, each row from left to right:

Stacey Ivanchuk, Susan Armstrong, Jennifer Klassen, Ron Saulnier, Jennifer McVeigh, Loreen Taricani, Scott Wright, Dennis Kim, Megan Begbie, Carla Cuthbert, Kent Arrell, Yotis Senis, Jay White and Mian Gao

1996-97 Graduate Students

Back row from left to right:

Stacey Ivanchuk, Jolene Brady, Angela Keightley, Kim Wynd, Kurt Almquist, Jonathan Pollett, Sarah Ely, Lee Fraser and Damir Karaturovic

Middle row from left to right:

Mian Gao, David Hipfner, Leah Young, and Chunyan Li

Front row from left to right:

Ron Saulnier, Dr. Bruce Elliott, Kelly Wilton, Carla Cuthbert and Megan Begbie

POSTGRADUATE (Written by Mrs. Jean Guindon)

Dr. Lois Shepherd is the Director of the Postgraduate Education Program in the Department of Pathology and also the Director of General Pathology. Dr. David Hurlbut is the Director of Anatomic Pathology and Dr. Samuel Ludwin is the Director of Neuropathology. Dr. William Corbett is the Director of Hematology until his retirement on June 30, 1996, after which time this appointment remains unfilled. Mrs. Jean Guindon and Ana Santos-Cachaco are the administrators of the Postgraduate Education Program in the Department.

Resident Appointments
January 1 - June 30, 1996

Dr. Monique Arquint	Resident III	General Pathology
Dr. Konrad Chan	Resident I	General Pathology
Dr. Navdeep Gill	Resident I	General Pathology
Dr. Plamen Kossev	Resident III	Anatomic Pathology
Dr. David Kydd	Resident II	Neuropathology
Dr. Sanjay Lambore	Resident III	General Pathology
Dr. Michael Rutherford	Resident I	Anatomic Pathology
Dr. John Vu	Resident I	General Pathology
Dr. Changgao Yang	Resident IV	General Pathology
Dr. Richard Yu	Resident II	General Pathology

PGY-1 Appointments (Clinical Internships)
January 1 - June 30, 1996
There are no PGY-1 appointments for this period.

Resident Appointments
July 1 - December 31, 1996

Dr. Monique Arquint	Resident IV	General Pathology
Dr. Konrad Chan	Resident II	General Pathology
Dr. Navdeep Gill	Resident II	General Pathology
Dr. Plamen Kossev	Resident IV	Anatomic Pathology
Dr. David Kydd	Resident III	Neuropathology
Dr. Sanjay Lambore	Resident IV	General Pathology
Dr. Michael Rutherford	Resident II	Anatomic Pathology
Dr. John Vu	Resident II	General Pathology
Dr. Changgao Yang	Resident IV	General Pathology
Dr. Richard Yu	Resident III	General Pathology

PGY-1 Appointments (Clinical Internships)
July 1 - December 31, 1996

Dr. James Safadi	PGY-1	General Pathology

POSTGRADUATE STUDIES (cont'd...)

Awards

Kydd, D. — Dr. Robert S.A. Prentice Annual Prize for best presentations by a pathology resident at Queen's University.

Conferences (Pr - presentation paper and Po - poster)

Rutherford, M. — Expression of the Transcription Factor E2A in Human Tissues. (Po) Association for Molecular Pathology, 2nd Annual Meeting.

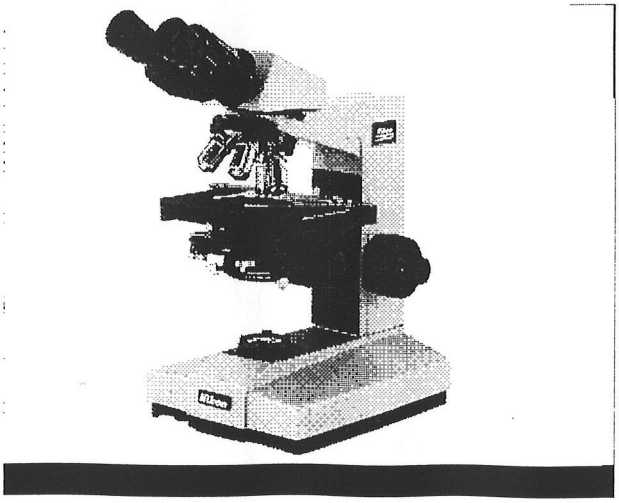
Vu, J. — A fatal case of Flutamide-Induced Fulminant Hepatic Failure (Po) Royal College of Physicians and Surgeons of Canada Meeting in Halfiax, NS, September 1996.

Publications

Rutherford, M., Kumar, A., Coulombe, B., Skup, D., Carver, D.H. and Williams, B.R.G. Expression of Intracellular Interferon Constitutively Activated ISGF3 and Confers Resistance to EMC Viral Infection. Journal of Interferon and Cytokine Research 16:507-510, 1996.

Tuck, A.B., Park, M., Sterns, E.E., Boag, A. and Elliott, B.E. Coexpression of Hepatocyte Growth Factor and Receptor (Met) in Human Breast Carcinoma. American Journal of Pathology 148(1):225-232, 1996.

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. S. Boag: Dr. Boag's research projects involve 1) Co-ordinated Expression of Transforming growth factor B1 and Matrix Metalloproteinases in Prostate Cancer (funded by Clare Nelson Fund); 2) Cellular Localization of Multidrug Resistance Protein (MDRP) in Lung Cancer (funded by Cancer Research Society grant held by Drs. Cole & Deeley); 3) The Role of Prostatic Inflammation in Benign Prostatic Hyperplasia (funded by Kidney Foundation of Canada under grant held by Dr. C. Nickel); 4) Stromal Interactions in Breast Cancer Metastasis: Role of Hepatocyte Growth Factor and extracellular Matrix (with Dr. B. Elliott); 5) Endogenous Galectin Expression in the Male Urogenital Tract. In collaboration with Dr. H. Ceri (University of Calgary), J.C. Nickel (Urology) and I. Young (Pathology); 6) Human Tumour Tissue Bank (funded by KGH patient-care related fund); and 7) Loss of Heterozygosity in the Cowden's Gene Region of Chromosome 10 in Sporadic Breast and Prostate Cancer (in collaboration with Dr. Lois Mulligan, Dept. of Pathology and Pediatrics, Queen's University).

Dr. S. Cole: Dr. Cole's research projects involve 1) Drug resistance in small cell lung cancer; 2) Antisense Oligonucleotide-mediated Suppression of MRP Expression; 3) Monoclonal Antibodies against Extracellular Epitopes of MRP; 4) Cellular and Molecular Studies of Drug Resistance Mediated by MRP; 5) Structure/function Studies of MRP.

Dr. C. Collier: Dr. Collier's research projects involve 1) Re-order Frequency Pilot Project; 2) Bedside Glucose Monitoring Outcome Study; 3) Myoglobin & Troponin II - multidisciplinary studies (with Drs. Ali, Morton, Drover, Dagnone); 4) Microalbumin - Method Development and Evaluation on the Paramax; 5) Total Lipids Versus Triglycerides as an Indicator of Malabsorption of Intralipids and Neonates; and 6) How to Develop a Decentralized Lab Testing Program.

Dr. R. Deeley: Dr. Deeley's research projects involve 1) Molecular Basis of Cisplatin Resistance in Small Cell Lung Cancer Line; 2) Effect of estrogen on gene expression in liver; 3) Monoclonal antibodies specific for extracellular epitopes of MRP; 4) Molecular and cellular studies of MRP-related multidrug resistance; 5) Antisense oligonucleotide-mediated suppression of multidrug resistance in cultured cells overexpressing multidrug resistance-associated protein (MRP); 6) Drug resistance conferred by multidrug resistance associated protein (MRP); and 7) Maintenance of Fluorescence Activated Cell Sorter and Confocal Microscopy; a multi-user facility.

Dr. G.J. Delisle: Dr. Delisle's research projects involve 1) Data Base Collectionon Biofilms, American Society of Microbiology; 2) Hardware for Digitized Data Base (funded by the Principal's Development Fund); 3) CDROM Production ASM - Biofilms - American Society for Microbiology (funded by Waxsman Foundation and Annenberg Foundation); 4) Hyperclinic "Diagnosis in Motion" contract for CDROM publication; and 5) On-Line Microbiology Course (funded by Part-time Studies, Queen's and SWEP).

RESEARCH PROGRAMS (Continued)

Dr. D. Dexter: Dr. Dexter's research projects involve 1) Image Collection Digitization and Data Bank Archive.

Dr. A.M.V. Duncan: Dr. Duncan's research projects involve 1) Networks of Centres of Excellence - Genetic Diseases Network (In-Situ Hybridization Mapping).

Dr. B. 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-Dependent Signalling Pathways as possible Targets for Therapeutic Intervention in Survival, Growth and Metastasis of Breast Carcinoma; 3) IDEA: Studies on Platelet-derived Growth Factor B Receptor and Hepatocyte Growth Factor Receptor c-met in paracrine interactions in Human Breast Cancer and 4) Mesenchyme interactions in breast cancer metastasis: Role of hepatocyte growth factor and extracellular matrix.

Dr. A. Fletcher: Dr. Fletcher's research projects involve 1) A Novel Approach to the Diagnosis and Treatment of Endometriosis: Photodynamic Therapy.

Dr. S. Ford: Dr. Ford's research projects involve 1) Clinical Association of Cardiolipin Antibodies; 2) Study of Infectious Disease in Prisons; and 3) Development of "Life Satisfaction" (questionnaire for patients starting on proteinase inhibitors).

Dr. A. Giles: Dr. Giles' research projects involve 1) The Regulation of Hemostasis in Health & Disease; 2) The Rgulation of Gene Expression and Product Availablility in Shear Stress and Thrombin-Stimulate Endothelium in Vivo; 3) Evaluation of Modified Recombinant F.VIII; 4) MDA-180 Development; 5) F.VIII Inhibitor Surveillance in Canadian Hemophilia Population; and 6) Role of alpha1 Proteinase Inhibitor in Regulating Neurophil Elastase in Experimental and Clinical Disseminated Intraveascular Coagulation.

Dr. P. Greer: Dr. Greer's research projects involve 1) Knocking out of the Murine *fps* proto-oncogene; 2) Role of the PML.RAR alpha oncogene in acute Promyelocytic Leukemia; 3) Molecular basis of the genetic lesion t(15/17)(q22;q21) in the etiology of acute promyelocytic leukemia; 4) Tyrosine kinases in the Zebrafish; 5) Targets of the PML/RARα oncogene in acute promyelocytic leukemia: The molecular basis of leukemogenesis; 6) Targeted mutation of the Murine *fps* proto-oncogene; 7) Molecular Targets of the Fps and Fer tyrosine kinases; and 8) Knocking out the murine *fer* gene.

Dr. D. Hurlbut: Dr. Hurlbut's research projects involve 1) Human Esophageal Mast Cells in Gastroesophageal Reflux Disease; 2) Glycoconjugate Expression in Reflux-Associated Human Esophageal Disease; and 3) Apoptosis in Inflammatory Bowel 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; and 3) HDL and inflammation: implications for cholesterol flux.

RESEARCH PROGRAMS (Continued)

Dr. D. LeBrun: 1) Dr. LeBrun's research project involves 1) Subcellular Localization of the E2A-PBX1 Leukemogenic Transcription Factor; 2) Transcription Regulation by E2a-Pbx1; 3) Isolation & Characterization of E2a-Pbx1 Target Genes; 4) E2A-PBX1 Chimeric Transcription Factor in Leukemia; and 5) An Experimental Assay for E2a-Pbx1-mediated Neoplastic Transformation.

Dr. D. Lillicrap: Dr. Lillicrap's research projects involve 1) The control of von Willebrand factor expression; 2) Factor VIII gene therapy in marrow stromal cells; 3) An analysis of the regulatory regions of the human factor VIII gene; 4) Characterization of mechanisms regulating the developmental expression of coagulation factor IX; 5) The role of hepatic leukemia factor in the pathogenesis of the ecquired bleeding disorder in acute lymphoblastic leukemia; and 6) Transcriptional regulation of the Factor VIII gene.

Dr. S. Ludwin: Dr. Ludwin's research projects involve 1) Demyelination, remyelination and oligodendrocyte behaviour in vivo and in organotypic cultures of the central nervous system; and 2) Collaborative work on Alzheimer's Disease (with Dr. R. Kisilevsky and Dr. I. Young).

Dr. P. 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) Cyclic nucleotide phosphodiesterases in arteries; 2) The regulation of gene expression and product availability in shear stress and thrombin stimulated endothelium in vivo; 3) Effects of nitrovasodilators, NO and CO on blood vessel function; and 4) Mechanisms of erectile dysfunction

Dr. C. Mueller: Dr. Mueller's research projects involve 1) Hierarchical Gene Regulation in Liver Cell Differentiation (NCIC); 2) The Functioning of Hepatic Leukemia Factor (HLF) in Normal and Leukemic Cells; 3) Regulation of the HIV LTR by SP1; and 4) Par Proteins in Transcriptional Regulation and Transformation.

Dr. M. Richardson: Dr. Richardson's research projects involve 1) Endothelial Injury & Atherosclerosis; 2) Endothelial Injury in Diabetes; and 3) Regulation of Gene Expression and Product Availability in Shear Stress and Thrombin Stimulated Endothelium in Vivo.

Dr. J.P. Rossiter: Dr. Rossiter's research projects involve; 1) Rescuing injured motor neurons; and 2) Molecular Mechanisms of Axotomy-Induced Apoptosis of Rat Facial Motoneurons.

Dr. C. Rowlands: Dr. Rowland's research projects involved 1) Cytomegaly of pancreatic D-cells in triploidy.

Dr. M. Schunk: Dr. Schunk's research project involves 1) Cerebellar hypoplasia in rats.

RESEARCH PROGRAMS (Continued)

Dr. S. SenGupta: Dr. SenGupta's research projects involve 1) Thermography: its relation to pathologic characteristics, vascularity, proliferation rate and survival in invasive ductal carcinoma of the breast; 2) Localization of platelet-derived growth factor beta-receptor expression in the peri-epithelial stroma of hman breast carcinoma; 3) Vascularity demonstrated by Doppler ultrasound and immunohistochemistry in invasive ductal carcinoma of the breast; 4) Assessment of NSAIDS in osteoarthritis using growth-factor mediated matrix formation by chondrocytes; 5) Study of breast cancer and the environment; 6) Isotope clearance and breast tumour vascularity; 7) Histopathologic and clinical differences between short- and long-term survivors of breast cancer; 8) Analysis of oncogene expression, proliferative rate, and hormone receptor status in fibroadenomas; 9) Pathological and biomechanical evaluation of rheumatoid and non-rheumatoid tendons and ligaments; and 10) Pathological evaluaiton of potential prognostic factors in follicular neoplasms in the thyroid; and 11) Breast Cancer Epidemiology in Ontario.

Dr. L. Shepherd: Dr. Shepherd's research projects involve 1) Canadian Study Chair NCIC CTG Cl.1 - A phase III comparison of fludarabine phosphate (NSC#312887) vs. chlorambucil vs fludarabine phosphate + chlorambucil in previously untreated B-cell lymphocytic leukemia; 2) Canadian Study Chair NCIC CTG AL.2 - A phase III randomized study of all-trans retinoic acid vs. cytosine arabinoside and daunorubicin as induction therapy for patients with previously untreated promyelocytic leukemia; 3) Canadian Study Chair NCIC CTG CO.5 - A controlled phase III evaluation of 5-FU combine with levamisole and leucovorin as adjuvant treatment for resectable colon cancer; and 4) 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.

Physician Coordinator:
1) A double-blinded randomized trial of tamoxifen versus placebo in premenopausal, node positive and node negative women who have completed adjuvant chemotherapy; 2) A randomized trial of antiestrogen therapy versus combined antiestrogen and octreotide LAR therapy in teh adjuvant treatment of post-menopausal breast cancer; 3) A phase I/II study of docetaxel and epirubicin as first line therapy for metastatic breast cancer; 4) A randomized comparative trial of high dose chemotherapy and autologous stem cell supprot vs standard therapy folllowing response to anthracycline or taxane chemotherapy in women with metastatic breast cancer; 5) A randomized double blind study of vorozole versus placebo in women with primary breast cnacer completing five or more years of adjuvant tamoxifen; 6) Chemotherapy with 5-FU and L-leucovorin following potentially curative resection of liver or lung metastasis from colorectal cancer; 7) Evaluation of 5-FU by bolus injection versus 5-FU by prolonger venous infusion versus 5-FU by bolus injection plus leucovorin and levamisole prior to and following combined prolonger venous infusion 5-FU plus pelvic XRT in patients with rectal cancer; 8) Phase III prospective randomized traial comparing laparoscopic assisted colectomy versus open colectomy for colon cancer; 9) Radiotherapy or radiotherapy plus ABVD versus ABVD alone in early stage Hodgkin's disease.

Dr. S. Taylor: Dr. Taylor's research projects involve 1) Optimizing a genetic test for Hirschsprung's disease; 2) Development of a molecular genetics Testing Program for Inherited Breast and Ovarian Cancer; and 3) Genetic Analysis of the BRCA1 Gene in Familial Breast and Ovarian Cancer.

Dr. L. Tomalty: Dr. Tomalty's research projects involve 1) Interactive Multimedia Technology for Teaching Microbiology: Development of the CDROM "Hyperclinic: Interactive Case Studies in Medical Microbiology"; 2) Development of Internet Based Microbiology course.

Dr. D. Zoutman: Dr. Zoutman's research projects involve 1) Direct costs of surgical wound infections to hospitals: a microeconomic analysis at KGH; 2) National antimicrobial resistance surveillance project; 3) National multiresistant staphylococcus aureus (MRSA) surveillance project; 4) Epidemiology of vancomycin resistant enterococci in Canadian hospitals; 5) Hospital Utilization Improvement Trial of Surgical Prophylactic Antibiotics (HUITSPA) phase 2; 6) Interaction between pyocyanin and nitric oxide; 7) National surveillance of nosocomial surgical wound infections - Project Leader of Canadian Hospital Epidemiology Committee; 8) Randomized double blind placebo controlled trial of GG167 in the treatment of influenza infections; 9) Randomized Double Blind Placebo Controlled Trail of GG167 in the Prevention of Influenza Infections in exposed individuals; 10) Quantitative Analysis of exposures to Blood Born Pathogens by Corrections Canada Staff in five Maximum Security Institutions; 11) National survey of TB patient education strategies; and 12) Antimicrobial substances produced by bacterial cells.

1996 RESEARCH PROJECTS AND GRANTS

NAME	AGENCY	AMOUNT	TITLE OF RESEARCH PROJECT
Dr. A. Boag	KGH Patient Care Related Research Fund	$11,178	For establishment of Breast Frozen Tumour Tissue Bank
Dr. A. Boag	Queen's Research Iniative Fund	$30,000	
Dr. S. Cole, Dr. R. Deeley	NCIC	$113,000	Structure/function studies of MRP
Dr. S. Cole	NCIC	$63,000/yr	Drug Resistance in Small Cell Lung Cancer
Dr. S. Cole & Dr. R. Deeley	ISIS	$50,000	Antisense Oligonucleotide-mediated Suppression of MRP Expression
Dr. S. Cole & Dr. R. Deeley	Centocor	$50,000	Monoclonal Antibodies Against Extracellular Epitopes of MRP
Dr. S. Cole & Dr. R. Deeley	MRC	$115,000	Cellular and Molecular Studies of Drug Resistance Mediated by MRP
Drs. C. Collier, Ali, Dagnone, Morton, Drover	Sanofi Pasteur Diagnostics	$3,000	Myoglobin & Troponin II - Multidisciplinary Studies
Drs. R. Deeley & S. Cole	MRC	$115,000	Molecular and cellular studies of MRP-related multidrug resistance
Dr. R. G. Deeley	Medical Research Council	$92,936	Effect of estrogen on gene expression in liver
Drs. R.G. Deeley & S. Cole	Medical Research Council	$39,266	Molecular basis of drug resistance in a lung carcinoma cell line
Drs. R.G. Deeley & S. Cole	National Cancer Institute	$113,000	Drug resistance conferred by multidrug resistance associated protein (MRP)
Dr. R. Deeley & Dr. S. Cole	ISIS	$50,000 US	Antisense Oligonucleotide-mediated Suppression of MRP Expression
Dr. R. Deeley & Dr. S. Cole	Centocor	$50,000 US	Monoclonal Antibodies Against Extracellular Epitopes of MRP
Dr. G. Delisle & Dr. D. Dexter	Principal's Development Fund	$4,888	Image Collection, Digitization & Data Bank Archive

Dr. G. Delisle & Dr. L. Tomalty	Wm. C. Brown Publishers	$105,000	CDROM Production of "Microbles in Motion". Textbook on Microbiology
Dr. G. Delisle	Waxman Foundation/Americ an Society of Microbiology	$40,000	Data Base Collection on Biofilms, American Society of Microbiology
Dr. G. Delisle	Queen's SWEP	$8,000	On-line Microbiology course - Part-Time studies
Dr. G. Delisle	Waxman Foundation	$150,000US	CD ROM production ASM - Biofilms - American Society for Microbiology
Dr. D. Dexter & Dr. G. Delisle	Principal's Development Fund	$4,888	Image Collection, Digitization & Data Bank Archive
Dr. A. Duncan	Networks of Centres of Excellence	$100,100	In Situ Hybridization Mapping
Dr. B. Elliott	NCI	$59,923	Mesenchyme interactions in growth and metastasis of a murine mammary carcinoma
Dr. B. Elliott	Candian Breast Cancer Foundation	$25,000	Hepatocyte growth factor-dependent signalling pathways as possible targets for therapeutic intervention in survival, growth and metastasis of breast carcinomas
Dr. B. Elliott	US Army Breast Cancer Research Initiative	44,680 US	Studies on platelet-derived growth factor ß-receptor and hepatocyte growth factor receptor c-met in paracrine interactions in human breast cancer
Dr. B. Elliott	US Army Breast Cancer Research Initiative	78,982 US	Role of an hepatocyte growth factor autocrine loop in growth and metastasis of breast cancer
Dr. B. Elliott	MRC Maint. Grant	46,500	Maintenance grant for flow cytometer and confocal microscope facility
Dr. B. Elliott	MRC Maint. Grant	$19,350	Maintenance grant for flow cytometer and confocal microscope facility

Dr. B. Elliott	Anonymous Donation	$10,000	
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. A. Giles	MRC	$103,215	The regulation of hemostasis in Health & Disease
Dr. A. Giles	Bayer Corp.	$75,000	Evaluation of Modified recombinant F.VIII
Dr. A. Giles	HSFO	$129,497	The retulation of gene expression and product availability in shear stress and thrombin-stimulate endothelium in vivo
Dr. A. Giles	Organon Teknika	$47,798	MDA-180 Development
Dr. A. Giles	CBA	$60,625	F.VIII Inhibitor surveillance in Canadian hemophilia population
Dr. A. Giles	Bayer/CRS	$70,000	Role of alpha1-proteinase inhibitor in regulating neutrophil elastase in experimental and clinical disseminated intravascular coagulation
Dr. A. Giles	GTI	$37,000US	
Dr. P. Greer	NCIC	$79,000	Knocking out of the murine fps proto-oncogene; Tyrosine kinases n the zebrafish; Targeted mutation of the murine fps proto-oncogene.
Dr. P. Greer	MRC	$79,000	Molecular targets of the fps and fer tyrosine kinases; Knocking out the murine fer gene.
Dr. P. Greer	CRS	$ 28,440	Molecular basis of the genetic lesion t(15/17)(q22;q21) in the etiology of acute promyelocytic leukemia
Dr. P. Greer	Leukemia Research Fund of Canada	$26,400	Targets of the PML/RARα oncogene in acute promyelocytic leukemia: The molecular basis of leukemogenesis
Dr. R. Kisilevsky	NEUROCHEM Inc.	$160,000	An approach to the development of a treatment for amyloids and Alzheimer's disease

Dr. R. Kisilevsky	NEUROCHEM Inc.	$203,000	An approach to the development of a treatment for amyloids and Alzheimer's disease
Dr. R. Kisilevsky	MRC	$97,000	Amyloidogenesis: an analysis of the causative factors in an experimental murine model
Dr. R. Kisilevsky	Heart & Stroke	$33,000	HDL and inflammation: Implications for Cholesterol flux
Dr. D. LeBrun	Hosp. for Sick Children	$63,797	E2A-PBX1 chimeric transcription factor in leukemia
Dr. D. LeBrun	Leukemia Res. Fund	$28,600	Transcription regulation by E2a-PBx1
Dr. D. LeBrun	ARC	$ 3,000	Subcellular localization of the E2A-PBX1 leukemogenic transcription factor
Dr. D. LeBrun	Clare Nelson Bequest	$9,000	Isolation and characertization of E2a Pbx1-mediated neoplastic transformation
Drs. D. Lillicrap & A. Giles	Canadian Hemophilia Society	$ 29,000	Factor VIII Gene Therapy in Marrow Stromal Cells
Dr. D. Lillicrap	Heart & Stroke Foundation	$ 59,212	The control of von Willebrand factor expression
Dr. D. Lillicrap	Heart & Stroke Foundation	$66,662	Transcriptional regulatin of the factor VIII gene
Dr. D. Lillicrap	MRC	$100,926	Characterization of Mechanisms Regulating the Developmental Expression of Coagulation Factor
Dr. D. Lillicrap	Cutter Biological/ Canadian Red Cross	$ 73,000	An analysis of the regulatory regions of the human factor VIII gene; 6) Ontario Cancer Genetics Network
Dr. D. Lillicrap	Clare Nelson Fund	$10,000	The Role of Hepatic Leukemia Factor in the Pathogenesis of the Acquired Bleeding Disorder in Acute Lymphoblastic Leukemia
Dr. S.K. Ludwin	MRC	$ 66,187	Demyelination, remyelination and oligodendrocyte behaviour in vivo and in organotypic cultures of the central nervous system

Dr. P. Manley & Dr. J. Pater	NCIC	$42,500	Contract: Collection, verification and dissemination of tissue sections of study material
Dr. D. Maurice	HSFO	$71,987	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. Adams, Heaton	Kidney Foundation	$40,000	Mechanisms of erectile dysfunction
Dr. C. Mueller	NCIC	$ 79,794	Hierarchical Gene Regulation in Liver Cell Differentiation (NCIC)
Dr. C. Mueller	NCIC Renewal	$ 93,500 + $6,818 Equip.	Hierarchical Gene Regulation in Liver Cell Differentiation (NCIC) renewal
Dr. M. Richardson	HSFO	$65,000	Endothelial Injury and Atherosclerosis
Dr. M. Richardson, Dr. A. Giles	HSFO	$68,000	
Dr. J. Rossiter	NCE Neuroscience Network	$28,333	Rescuing Injured Motor Neurons
Dr. J.P. Rossiter	ALS Society of Canada	$25,000	Molecular Mechanisms of Axotomy-Induced Apoptosis of Rat Facial Motoneurons
Dr. J. Rossiter	ALS Society of Canada	$69,000	Molecular Mechanisms of Axotomy-Induced Apoptosis of Rat Facial Motoneurons
Drs. L. Shepherd, E. Eisenhauer, K. James, B. Zee, J. Myles & J. Pater	NCIC	$2,635,581	Clinical Trials Group
Drs. L. Shepherd, H. Dosch, R. Meyer, B. Zee	Leukemia Research Fund	$40,000	EBV and Lymphoma
Drs. S. Taylor and L. Mulligan	Hospital for Sick Children	$43,000	Optimizing a genetic test for Hirschsprung's disease

Dr. S. Taylor & Dr. D. Lillicrap	Clare Nelson Bequest Fund	$4,900	Development of a molecular genetics testing program for inherited breast and ovarian cancer
Drs. S. Taylor, D. Pross, C. Forster, D. Lillicrap, R. Deeley, L. Mulligan, M, Khalifa, E. Sterns	OCTRF	$13,000	Genetic analysis of the BRCA1 gene in familial breast and ovarian cancer
Dr. S. Taylor, et al	NIH	$22,939	Genetic analysis of the BRCA1 gene in familial breast and ovarian cancer
Dr. L. Tomalty & Dr. G. Delisle	Wm. C. Brown Publishers	$105,000	CDROM Production of "Microbles in Motion". Textbook on Microbiology
Dr. L. Tomalty & Dr. G. Delisle	SWEP	$8,000	Development of Internet based microbiology course (MICRO 125)
Dr. D. Zoutman	Glaxo Wellcome Incorporated	$35,000	Randomized Clinical Trial of GG167 in Treatment & Preventiono f Influenza A & B Infections
Dr. D. Zoutman	Corrections Canada	$30,000	Quantitative Analysis of exposures to Blood Born Pathogens by Corrections Canada Staff in five Maximum Security Institutions
Dr. D. Zoutman, Dr. E. Costello	Ontario Lung Association	$ 2,916	National Survey of tB patient educaiton strategies

DEPARTMENT OF PATHOLOGY
VISITING LECTURERS
1996

VISITING LECTURERS
1996

"Peripheral Myelin Protein-22 in Hereditary Peripheral Neuropathies"
Dr. Jack Snipes, McGill University, Montreal, February 13, 1996.

"Regulation of DNA Repair and V(D)J Recombination in Normal and Neoplastic Lymphocyte Development"
Dr. Jayne Danska,Hospital for Sick Children, Toronto, March 5, 1996.

"Avoiding Dead Ends in DNA Metabolism: Mammalian Polynucleotide Kinases and DNA Ligases"
Dr. D. Lasko, Lady Davis Institute for Medical Research, Montreal, March 19, 1996.

"Heterozygous Lethality of VEGF Deficiency Revealed by Completely ES-Cell-Derived Embryos"
Dr. Andras Nagy, Samuel Lunenfeld Research Institute, Mount Sinai Hosp., Toronto, april 4, 1996.

"Mechanisms for Developing New Drugs and Their Clinical Development"
Dr. W. Steward, NCIC, Queen's, April 16, 1996.

"A Tale of Two Yeasts: Sodium Pumps and Antiports"
Dr. Paul Young, Biology, Queen's, April 23, 1996.

"Genomic Imprinting and Implications for Human Disease"
Dr. Rosanna Weksberg, Hospital for Sick Children, Toronto, april 30, 1996.

"Signal Transduction in Transgenic Mouse Models of Human Breast Cancer"
Dr. W. Muller, Pathology, McMaster, June 17, 1996.

"The Hepatocyte Growth Factor Receptor Family: Signal Transducers for Invasive Growth"
Dr. Sylvia Giordano, U. of Torino, Italy, Septebmer 9, 1996.

"Efferent Function of Sensory Nerves in the Gastrointestinal Tract"
Dr. Stephen Vanner, Gastroenterology, HDH, October 8, 1996.

"A Model of Hematopathological Practice in a Community Hospital"
Dr. Dilys Rapson, Department of Oncology, KGH, October 17, 1996.

"Correlation of PML-RARa Fusion mRNA Type with Clinical, Morphologic and Cytogenetic Features in Acute Promyelocytic Leukemia"
Dr. David Viswanatha, U. of New Mexico, October, 22, 1996.

"Lymphoproliferative Disorders Associated with Inherited Fas Gene Mutations"
Dr. Megan Lim, NCI/NIH, October 29, 1996.

"Human Myeloblastic Leukemia Progenitors: Growth and Growth Regulation in Vitro"
Dr. Michael Rutherford

"Mapping of the Gene for Cowden Disease and Genetic Analysis of Related Tumours"
Dr. Charis Eng, Harvard University, December 2, 1996.

"Control of mRNA Splicing by Protein Kinases"
Dr. John Bell, Ottawa Regional Cancer Centre, December 3, 1996.

SENIOR STAFF
DEPARTMENT OF PATHOLOGY
AND QUEEN'S UNIVERSITY

LECTURES

SENIOR STAFF
DEPARTMENT OF PATHOLOGY
AND QUEEN'S UNIVERSITY
LECTURES

"Hepatocyte Growth Factor and Extracellular Matrix in the Regulation of Breast Cancer Metastasis"
Dr. B. Elliott, Department of Pharmacology, Queen's University

"Hepatocyte Growth Factor and Extracellular Matrix in the Regulation of Breast Cancer Metastasis"
Dr. B. Elliott, Department of Anatomy and Cell Biology, Queen's University

"Of Starch and Silk: Amyloid and Alzheimer's Disease"
Dr. R. Kisilevsky, Public Lecture as recipient of one of the 1996 Prizes for Excellence in Research Awards, 202 School of Policy Studies, Queen's University

"Use of Multimedia in the Classroom"
Dr. L. Tomalty, Department of Pharmacology Seminar Series, Queen's University.

"Educational Technology: How to get Started"
Dr. L. Tomalty, Department of Women's Studies, Queen's University.

"Ductal Carcinoma in Situ"
Dr. S. SenGupta, Department of Oncology, Queen's University, March 21, 1996.

"Bone Tumours"
Dr. S. SenGupta, Department of Orthopedic Surgery, KGH, January 26, 1996.

Vice-Principal Suzanne Fortier
cordially invites you to a Public Lecture

Of Starch and Silk:
Amyloid and Alzheimer's Disease

given by

DR. ROBERT KISILEVSKY

Recipient of one of the 1996
Prizes for Excellence in Research

Monday, 3 February 1997 at 7 pm
in Conference Room 202, School of Policy Studies

A reception to honour Dr. Kisilevsky will follow the
lecture in the Lakeside Lounge at the University Club

R.S.V.P. Jean Whittle, 545-6933

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) Institute of Molecular and Cellular Biosciences, University of Tokyo, Japan, January 29, 1996; 2) Department of Biochemistry, Kyushu University, Fukuoka, Japan, January 31, 1996; 3) Institute for Cancer Research, Kagoshima University, Kagoshima, Japan, February 1, 1996; 4) Gordon Research Conference, "Drug Carriers in Biology and Medicine", Venture, CA, February 25, 1996; 5) Loeb Research Institute, Ottawa, March 25, 1996; 6) Johns Hopkins Oncology Centre, Baltimore, MD, May 6, 1996; 7) MRC Membrane Biology Groups, University of Toronto, May 13, 1996; 8) Monsanto/Searle, St. Louis, MO, June 26, 1996; 9) Department of Chemistry and Biochemistry, University of Guelph, September 25, 1996; EORTC International Meeting, "Anticancer Targets and Strategies for the Twenty-first Century", Castres, France, October 10, 1996; 10) International Conference on Glutathione and Glutathione-linked Enzymes in Human Cancer and Other Diseases, Hilton Head, SC, November 1, 1996.

Dr. R. Deeley 1) "Use of a Baculovirus system for Structure Function Studies of MRP", March 1996; 2) "Multidrug Resistance Mediated by MRP", Americal Society for Clinical Pharmacology and Therapeutics, Florida, March 1996; 3) "Structure and Function of MRP", Molecular Oncology Group, McGill University, April 1996; 4) "Structure and Function of MRP", Dept. of Biochemistry, University of Rochester, May 1996; 5) "European Organization for Research & Treatment of Cancer", Castres, France, October 1996.

Dr. G. Delisle 1) "The Hepatitis Alphabet Soup", Reginoal Occupational Health Nurses, Portsmouth Harbour, Kingston, March 27, 1996; 2) "Microbiology and Instructional Technology", Queen's Educational Technology, April 26, 1996; 3) "Antimicrobial Action and Resistance", CSLT Annual Conference, Winnipeg, June 18, 1996; 4) Hyperclinic Case Studies in Microbiology", Wm. C. Brown Publishers, Dubuque, Iowa, August 15, 1996; 5) "Antimicrobial Resistance", Bio/Merieux Inc., Toronto, September 11, 1996; 6) "Technology and Microbiology", University of Sask., Dept. of Microbiology, Saskatoon, Sptember 12, 1996; 7) "Technology and Teaching Animated Antimicrobials", Dept. of Pharmacology & Toxicology, Queen's, September 30, 1996; 8) "Parasitology Update", CME Infectious Diseases, Donald Gordon Centre, Kingston, November 6, 1996; 9) "Guidelines for Practice: Blood Cultures"-Workshop, Canadian Association Clinical Microbiology and Infectious Diseases, Hamilton, November 10, 1996.

Dr. B. Elliott 1) "Role of Hepatocyte Growth Factor and Extracellular Matrix in Growth and Metastasis of Breast Cancer", Institut Armand-Frappier, Laval-Des Rapides, PQ, May 28, 1996; 2) "cooperative Interaction Between Fibronectin and Hepatocyte Growth Factor in Anchorage-Independent Growth and Survival of a Breast Carcinoma", 2nd World Congress on Cellular and Molecular Biology, Ottawa, ON, September 1-7, 1996.

Dr. A. Giles 1) "What are the Major Questions for the Year 2000", Hemophilia Meeting,

London, ON, April 1996"; 2) "The Canadian F.VIII Inhibitor Surveillance Study", "Measurement of Factor VIII Inhibitors in the Canadian Hemophilia Population", Organon Teknika Thormbosis and Hemostasis Symposium, Toronto, ON, June, 1996; 3) "F.VIII Inhibitor Assays - the Kingston/Njimegan Study", SSC Fs.VIII/IX Subcommittee Meeting, held in Dublin at the WHF Congress Mtg., June 1996; 4) "The Prevalence of F.VIII Inhibitor Development in the Canadian Hemophilia A Population Following the Wide-Scale Introduction of High Purity Factor VIII Replacement Therapy" XXII International Congress of the World Hemophilia Federation, Dublin, Ireland, June 1996.

Dr. R. Kisilevsky 1) "SAA in Amyloidosis and Atherosclerosis:Future Implications": "Function of Acute Phase Serum Amyloid A: A Peek Through an Amyloid Window",Discussion Leader, Gordon Research Conference, Ventura, California, February, 1996; 2) "Amyloid, Proteoglycans, and a Potential Therapeutic Approach to Alzheimer's Disease", Faculty of Biological Sciences, University of Texas, San Antonio, Texas, March, 1996; 3) "Amyloid: A Pathologic Entity Whose Time Has Come", The Molecular Pathology of Disease, A Festschrift in Honor of Emmanuel Farber, Philadelphia, PA, June 1996; 4) "Amyloidosis - Lessons from a Mouse", Universita di Cagliari, Department of Experimental Pathology, Cagliara, Sardinia, Italy, October 1996; 5) "Cholesterol Release at Sites of Inflammation - How is it Mobilized?", Italian Society for the Study of Atherosclerosis, Oncological Hospital, Universita di Cagliari, Cagliara, Sardinia, Italy, October 1996; 6) "Amyloidosis - Lessons from a Mouse", Universita di Pavia, Pavia, Italy, October, 1996; 7) "Amyloidosis - Everything you wanted to ask but wouldn't", Pharmacia/Upjohn, Milan, Italy, October 1996; 8) "Can Deposition of Amyloid be Prevented in Alzheimer's Disease?" Cerebrovascular Disease in Alzheimer's Disease, New York Academy of Sciences, East Rutherford, New Jersey, November 1996; 9) "Amyloid: The "P" and Other Pathogenetic Components", Department of Nephrology, University of Toronto, City-wide Rounds, December 1996.

Dr. D. LeBrun 1) Terry Fox Immunology and Cancer Seminar Series, Hospital for Sick Children, January 1996; 2) Residents' Research Day, Department of Pathology, University of Ottawa, April, 1996.

Dr. D. Lillicrap 1) "Factor VIII molecular biology: advances and application to clinical care" Genetic Therapy Inc. Gaithersburg, Maryland USA, February 1996; 2) "Studies of factor VIII and IX gene regulation; how little is enough? Vascular Biology Group, Department of Pathology, McMaster University,, March 1996; 3) "Hemophilia: Molecular Diagnosis and Gene Therapy" Hematology Department, St. Justine Hospital, Montreal, March 1996; 4) "Gene therapy in Bleeding Disorders" Canadian Society of Transfusion Medicine, Toronto, May 24, 1996; 5) "The molecular biology of inherited bleeding disorders: from basic research to molecular diagnosis and therapy" Ontario Society of Clinical Chemists, Annual Scientific Symposium, North York Memorial Hall, North York City Centre, North York, ON, November 6, 1996; 6) "The genetic pathology of hemophilia" Bayer Coporation, Clift Hotel, Berkeley, California, November 9, 1996; 7) "Modern medical miracles: genetic engineering - prospects for the future" Seniors Talk,

St. Margaret's Church, Kingston, ON, November 22, 1996; 8) "The Genetics of Inherited Coagulation Disorders" Hematology Fellows Seminar Series - Hospital for Sick Children, Toronto, November 27, 1996.

Dr. S.K. Ludwin 1) Myelin Project Meeting, Verona, Italy, January 1996; 2) "Surgical Pathology in the Nervous System" for US-Can. Academy of Pathology, Washington, DC, March 1996; 3) "The Reactions of the Oligodendrocyte", American Committee for Treatment and Research in Multiple Sclerosis (ACTRIMS), Natinal Multiple Sclerosis Society, Florida, October, 1996.

Dr. P. Manley 1) "Canadian Health Care System and Laboratory", Association of Pathology Chairmen: Practice, Bermuda, 1996; 2) Academic Health Centres and the Re-engineered Laboratory: Issues in Laboratory Management Conferences, Toronto, 1996.

Dr. D.H. Maurice 1) Smooth Muscle Research Program,McMaster University, April 1996.

Dr. M. Richardson 1) "Alterations in the Morphology of the Aortic Endothelium and the Associated Alterations in von Willebrand Factor in JCR Fat Rats", Vessel Wall Research Group, McMaster University, January 1996.

Dr. S. Taylor 1) Ixth International Symposium on Technological Innovations in Laboratory Hematology, April 1996; 2) Association of Genetic Colleagues of Ontario, Session Chair, June 1996.

Dr. L. Tomalty 1)"Computers in the Classroom", 46th Annual Meeting of the Canadian Society of Microbiologists, University of Prince Edward Island; 2) "Educational Technology 2000: A Global Vision for Open and Distance Learning", Singapore.

SENIOR STAFF COMMITTEES

SENIOR STAFF COMMITTEES

Dr. S. Boag: Director, Histopathology Lab, KGH; Co-director, Immunopathology Lab, KGH; Member, Member, Laboratory Information System Prioritization Group, Dept. of Pathology, KGH; Member, Patient Care System/Laboratory Information System Interface Committee, Dept. of Pathology, KGH; Member, Kingston Regional Cancer Centre Lung Site Group; Member, Anatomic Pathology Renovation Committee, Dept. of Pathology, KGH.

Dr. S. Cole: Member, NCIC CTG Search Committee, Co-Director IND; Member, Graduate Studies and Research Committee (Fac. of Med.); Member Research Advisory Committee (Oncology); Member, Graduate Studies & Admissions Committee (Pharm. & Toxicol.); Chair, Polanyi Prizes Selection Committee, Ontario Council of Graduate Studies; Councillor, Pharmacological Society of Canada; Chair, Preclinical Pharmacology/Experimental Therapeutics Subcommittee, Program Committee, AACR; Member, Awards Committee, Cain Subcommittee, AACR; Member, Sustaining Membership Committee, AACR; Member, Board of Directors, AACR.

Dr. C. Collier: Alumni Teaching Awards Committee; Instructional Development Center, "Teacher/Scholar Network" Group; Admissions Committee,TIPS Faculty; Coordinator, Clinical Chemistry Journal Club; Management Committee, Clinical Chemistry; Coordinator, Clinical Chemistry Review Sessions for General Pahtology Residents; Chair, Decentralized Lab Testing Committee; KGH Division of Clinical Laboratories Staff Meetings; Coordinator, Medical Laboratory Technologist Training Program; Pathology Postgraduate Education Committee; Member, Education Committee, CSCC; Chair, Ad Hoc Committee, CSCC; Member, Team to Develop a Canadian DORA, CSCC; Member, Professional Affairs Committee, CSCC; Chair, Professional Affairs Division, CSCC; Member, Professional Affairs Committee, Ontario Society of Clinical Chemists; Observer, Subcommittee on Point-of-Care Testing, NCCLS; Observer, Subcommittee on Wellness Testing, NCCLS; Observer, Subcommittee on Ancillary Blood Glucose Testing, NCCLS; Observer, Subcommittee on Quality Improvement, NCCLS.

Dr. R. Deeley: Director, Cancer Research Laboratories; Research Director, KRCC; Chair, Research Advisory Committee, KRCC; Member, PART/T Committee (Biochem); Member, Research Executive, OCTRF, Member, Research Advisory Committee, OCTRF; Member, Management Committee, Provincial Cancer Predisposition Network, OCTRF; Member, Grants Panel F, NCIC.

Dr. G.J. Delisle: HDH Microbiology Laboratory; Director, KGH Microbiology Laboratory; Chair, Senate Committee on Appointment, Promotion, Tenure and Leave; Member, Consolidation/Rationalization Committee; UMEC Coordinator, Phase I (Micro); Chair, Infection Control Committee, HDH, Member, Pharmacy and Therapeutics Committee, HDH); Member, Antimicrobial Use Committee, KGH/HDH; Board of Governors Member Chair, Education Committee, Canadian College of Microbiology; Councillor, Editorial Advisory Board Member, Candian Association of jClinical Microbiology and Infectious Disease; Member, Board of Education and Training, Chair, Distance Education Committee, American Society of Microbiology.

COMMITTEES (Continued)

Dr. D. Dexter: Deputy Chief of Pathology and Director of Laboratories, HDH; Head - HDH Divisions of Blood Bank and Haematology; Director of MDS Laboratories and Consultant in Haematology and Cytology; Pathology Consultant, Ontario Cancer Foundation - Kingston Clinic; Member, HDH/KGH Joint Management Advisory Committee; Member, Pathology Promotions Committee; Member, HDH/KGH Laboratory Computer Interface Committee; Member, CLEO Management Group; Member, Postgraduate Education Committee; Member, MD Finance Committee; Member, Laboratory Consolidation Consultation Committee; Member, HDH/KGH Consolidated Laboratory Services Working Group; Member, Subcommittee for Core, Rapid Response, and Specialty Laboratories; Member, Advisory Committee at AP Consolidation; Member, Hematology Division Committee; Member, Phase I Curriculum Design Committee; Member, Laboratory Services Task Force of the Health Care Network of South Eastern Ontario; Member, General Pahtology Residency Programme Committee; Member, Anatomic Pathology Residency Programme Committee; Member, Ad Hoc Committee on Sondent for Transfusions; Member, Information Management Team; Member, Pre-Operative Assessment Clinic Committee; Member, Hospital and Patient Services Committee; Member, Comprehensive Planning Subcommittee of the Board; Founding Member of the Special Resources Committee - Le Royers Patrons; Past Chair, Medical Advisory Committee; Past Chair, Medical Advisory Committee Executive; Chairman, Infection Control Committee; Member, Out Patient Committee; Member, Medical Laboratory Technology Advisory Committee, St. Lawrence College; Consultant, Hematology Committee, MDS Laboratories.

Dr. A.M.V. Duncan: Director, Cytogenetics; Senator, University Senate; Ex-officio Member of Faculty Council; Member, Ban Righ Board, Member, Senate Nominations Committee; Faculty rep., Senate Committee on Honorary Degrees; member, Headship of Paediatrics Search Committee; Member, University Grievance Board; Member, Advisory Committee of the Queen's Writing Centre; Member, University Radiation Committee; Member, Task Force on Operations Review; Member, Honorary Degrees Nominating Committee; Member, Hannah Adjunct Search Committee; Member, Promotion/Appointment/Reappointment Committee; Member, Research Advisory Committee; Member, HDH Pathologist Search Committee; Secretary, CCMG; Member, Examination Committee CCMG; Member, Accreditation of Centres Committee CCMG; Member, Education Committee CCMG; Secretary, Genetics Society of Canada; and Member Genetics Cell Culture Committee for the Lab Proficiency Testing Program; Ex-officio Member of Faculty Council; Member Ban Righ Board; Member Senate Nominations Committee; Member, Advisory Committee of the Queen's Writing Centre; Member, Principtal's Task Force; Member, Pediatrics Head Search Committee; Member Grievance Board; Member, Honorary Degrees Nominating Committee; Chair, Equity Issues Committee; Member, Pathology Lab Management Committee; Member, Capital Equipment Committee; Member, Research Advisory Committee, Member, Strategic Planning Committee; Ad Hoc Member, Pediatrics Promotions and Appointment Committee; Member, Medicine Hiring Committee; Secretary, CCMG; Member, Accreditation of Centres Committee, CCMG; Member,Education Committee; CCMG, Member Program

Committee, CCMG; Secretary, Genetics Society of Canada; Member, Genetics Cell Culture Committee, Lab Proficiency Testing Program; Member, Friends of the History of Sciences Technology and Medicine.

Dr. B. Elliott: Chair, Research and Graduate Studies Committee; Coordinator: Flow Cytometry and Confocal Microscope Facility; Member, Queen's Graduate School Council; Member, Advisory Research Committee; Member, Search Committee for Hematopathology Candidate; Member, PART/T Committee; Member, Strategic Planning Committee; Coordinator, University-Public School Liaison Committee.

Dr. A. Fletcher: Director of Laboratory, Lennox & Addington County General Hospital; Member, Nominating Committee; Member, Postgraduate Education Committee; Member, Continuing Education Committee; Chair, Quality Assurance Committee; Member, Cytology Committee, Laboratory Proficiency Testing Program of Ontario; Member, Cytotechnology Advisory Committee of The Michener Institute for Applied Health Sciences.

Dr. S. Ford: Assistant Dean, Student Affairs, Faculty of Medicine; Ad Hoc Member, Curriculum Course Committee Representative, Infectious Disease; Ad Hoc Member, Promotion and Progress Committee; Member, Phase II Curriculum, Block A Coordinator; Undergraduate Education Committee; Member, PBL Committee; Infection Control Committee Member; Director, Autopsy Service; Cardiovascular Tumour Member, Canadian Reference Center for Cancer Pathology Corrections Canada, Eastern Region Infectious Disease Committee.

Dr. A. Giles: KGH Director, Hemostasis Lab; KGH Director, Hemophilia Program; Chair, HSFO Endowed Chair Initiative Committee; Member, Faculty Board; Member, Research Advisory Committee; Director, Coagulation Lab; Director, Hemophilia Program; Member, Pharmacy & Therapeutics Committee; Member, Joint Medical Staff Association; Member, Hematopathology Division; Member, Research Advisory Committee, HSFO; Member, Board of Directors, HSFO; Member, Thrombosis Interest Group; Chair, Working Party, International Society on Thrombosis & Haemostasis; Co-Chair, Subcmte on Animal Models of Hemorrhagic & Thrombotic Disorders, International Society on Thrombosis & Haemostasis; Member, Senior Advisory Council, SSC, International Society on Thrombosis & Haemostasis; Member, Subcmte on Anticoagulation, International Society on Thrombosis & Haemostasis; Member, Subcmte for F.VIII/IX, International Society on Thrombosis & Haemostasis; Chairman, Blood Coagulation Factor Inhibitor Subcommittee, Association of Hemophilia Centre Dir.

Dr. P. Greer: KRCC Research Advisory Committee; Member, PART/T Committee (Biochemistry); Search Committee for Headship (Biochemistry).

Dr. D. Hurlbut: Program Director, Anatomical Pathology; PGME Committee; AP Committee; GP Committee; External member, GI Residency Training Program Committee; Medical Audit and Tissue Committee, HDH; APWeekend Cross Coverage Planning Committee; Ontario Gut Club Meeting.

Dr. R. Kisilevsky: Member, Principal's Advisory Committee on Selection of Vice-Principal, Health Sciences and Dean, Faculty of Medicine; Member, Faculty Board; Member, KGH Staff Meetings; Member, KGH Research & Development Committee; Member, Queen's Department of Pathology Staff Meetings; Member, Research Advisory Committee.

Dr. D. LeBrun: Director, Immunohistology Lab; Member, Search Committee, Division of Hematology; Member, Faculty Board; Member, Clinical Teachers Association; Member, Anatomic Pathology Group Meeting; Member, Research Semianr Committee; Member, Search Committee, Pathology.

Dr. D. Lillicrap: Co-Director of Laboratory, KGH DNA Laboratory; Member, Search Committee for Headship of Diagnostic Radiology; Member, School of Graduate Studies and Research Graduate Council; Member, School of Graduate Studies and Research Steering Committee; Member, Division I, School of Graduate Studies; Member, AIDS Advisory Committee, KGH; Member, Blood Utilization Committee, KGH; Member, Research Advisory Committee, KGH; Member, Graduate Studies, Dept. of Pathology; Member, Research Advisory Committee, Dept. of Medicine; Member, Research Advisory Committee, Pathology; Canadian Hematology Society; Member, American Society of Human Genetics; Member, Canadian Hemophilia Society; Member, World Federation of Hemophilia; Member, International Society of Thrombosis and Haemostasis; Treasurer and Executive Committee Member, Association of Hemophilia Clinic Directors of Canada; Chairperson, Steering Group, Association of Hemophilia Clinic Directors of Canada; Member, Expert Advisory Committee on Blood Regulation, Health Canada, Health Protection Branch.

Dr. S. Ludwin: Member, Postgraduate Education Committee; Member, Equity Issues Committee; SEAMO Staffing Committee; President, Medical Staff Assoc. KGH, Member, KGH Medical Advisory Committee; KGH Board of Directors; Member, KGH CEO Planning Steering Committee; Member, KGH Board Planning Committee; Member, Department of Pathology Postgraduate Education Committee; Director, Neuropathology Training; Member, Department of Pathology Graduate Committee; Member, Departmental Finance Committee; Chairman, Pathology Promotion, Tenure and Appointments Committee; Member, Pathology Undergraduate Committee; President, Canadian Association of Neuropathologists; KGH Fiscal Advisory Committee; Chairman, KGH Credentials Committee; KGH Bioethics Committee.

Dr. P.N. Manley: Pathologist-in-Chief, HDH/KGH; Chairman, Dept. of Pathology, Queen's; Member, Graduate Committee; Member, Postgraduate 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, Medical Advisory Committee; Member, Medical Advisory Budget Review Committee; Member, Council of Department Heads, Member, CLEO Meetings; Chairman, Departmental Search Committee; Chairman, MD Compensation Committee Meetings; Member, Anatomic Pathology Senior Staff Meetings; Member, Lab. Admin. Management Committee; Member, Promotions, Appointments, Reappointments, Tenure and Termination Committee; Member, OAP; Founding Chairman, WASP; Member CAP (US); Member, International G.I. Club; Member, Ontario Lab Services Review; Member, OMA; Member, College of American Pathologists; Member, Ontario GI Club; Member, Association of Pathology Chairs (US).

Dr. D.H. Maurice: Member, Council of School Graduate Studies/Research (Dept. of Pharmacology Representative; Member, Research and Graduate Studies Committee; Member, Department of Pharmacology/Toxicology Staff Meetings; and Member, Pathology Staff Meetings; Member, Pathology PART/T Committee.

Dr. M. Raymond: Chief, KGH Clinical Chemistry; Director, Clinical Chemistry, Belleville General Hospital and L & A County Hospital; Consultant, Clinical Chemist - L&A County Hospital, Trenton Memorial Hospital, Smiths Falls Community Hospital, Prince Edward County Memorial Hospital, and Brockville General Hospital; Member, KGH Information Systems Steering Committee; Chair, KGH Isotope Committee; Member, HDH Utilization Committee; Lab. Admin. Management Committee; Member, Conjoint Committee for the Accreditation of Educational Programs in Medical Laboratory Technology - CMA; Chair, Medical Laboratory Program Advisory Committee - St. Lawrence College; and Secretary/Treasurer - Ontario Society of Clinical Chemists, Pathology MD Compensation Committee.

Dr. M. Richardson: Director, Electron Microscope Facility.

Dr. J.P. Rossiter: Co-ordinator, Department of Pathology Library; Member, Neuropathology Residency Training Committee; Member, Phase I Curriculum Development Committee.

Dr. C. Rowlands: Laboratory Medical Director, Perth & Smiths Falls Community Hospital; Director, Cytology, KGH/HDH; Member, Pathology Search Committee; Member, Douglas 2 Renovation Committee.

Dr. M. Schunk: Ex Officio Member, Animal Care Committee; Central Occupational Health & Safety; Member, Biohazard Committee;Member, Bioscience Complex Animal Care Committee; Department Head, Animal Care Services; Chair Advisory Committee, St. Lawrence College; Veterinarian Director at Large, Canadian Association for Laboratory Animal Medicine; and Organizer of education program, Laboratory Animal Veterinarians Association.

Dr. S. SenGupta: Medical Cirector, Kingston Hospitals CLEO; Member, Postgraduate Medical Education Committee; Member, Southeastern Ontario Health Care Network Regional Laboratory Task Force; Member, Hematopathologist Search Committee; Member, MD/PhD Compensation Committee; Chair, CLEO Management Team; Vice President and Executive, OAP; Member, Laboratory Medicine Program Committee, OCTRF; Member, MOH-OAML Fee Schedule Review Committee, OMA; Chair, Tariff Committee, OMA; Member, Test Committee on Laboratory Medicine, RCPS; Member, Examination Board, Certification in Anatomic pathology, RCPS; Chair, Membership Committee, CAP.

Dr. L. Shepherd: Director, Postgraduate Education Committee; Internal Review Committee, RCPSC Accreditation; Member, Hematologist Search Committee; Member, Hematological Path Training Program; Chair, Section of Hematopathology, Member, Joint Practice for Transplantation and Organ Procurement; Member, Joint Hospital Advisory Committee on HIV Notification of Blod Recipients; chair, Advisory Committee on Transfusion Medicine; Member, GI Cancer Site Group; Ad Hoc Committee, HDH, Informed Consent for Blood Products; Member, Coordinating Committee Post Graduate Education; Member, GP Training Committee; Member, AP Training Committee; Member, PART/T Committee; Member, Search Committee; Core lab Working Group; Member, Laboratory Management.

Dr. S. Taylor: Co-Director, KGH DNA Laboratory; Member, Biohazard Safety Committee; Chair, Kingston Regional Cancer Gneetics Research Program; Search Committee, Genetic Counsellor, OCTRF; Molecular Genetics Consensus Group member, Ontario Ministry of Health Molecular Genetics Study; Chair, Ontario Ministry of Health Fellowship Review Committee; Member, Subcommittee on Molecular Genetics, U.S. National Committee for Clinical Laboratory Standards; Member, Committee for the Development and Review of Workload Unit Measurement in Molecular Genetics, Canadian Institute for Health Information; Secretary, Ontario Cancer Genetics Network Laboratory Directors Committee; Member, Clinical Practice Resource Group; Member, LPTP Molecular Genetics Committee.

Dr. L. Tomalty: Consultant, Lennox & Addington General Hospital; 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; Member, Microbiology and Immunology Instructional Technology Committee; Representative, Graduate Council, Microbiology and Immunology; Member, Pathology Postgraduate Education Committee; Chair, Quality Assurance Committee.

Dr. S. Wasan: Director, Histopathology Lab, HDH; Director, Cytology Lab, HDH; Coordinator, Medical Mortality Conferences; Coordinator, Surgical Mortality Conferences; Coordinator, Paediatric Mortality Conferences; Coordinator, Surgical Pathology Conferences; Acting Director of Laboratories (in Dr. Dexter's absence); and Coordinator, Oral Examination for Residents at HDH; Member, Tissue and Audit Committee; Member (Medical Representative) Quality Circle Committee.

Dr. I. Young: Director, Phase 1 Medical Science Rounds; Member, Postgraduate Education Committee; Member, KGH Credentials Committee; Director, Combined Division of Anatomic Pathology, KGH, HDH; Chair, PART/T Committee.

Dr. D. Zoutman: Associate Director, KGH & HDH Microbiology; Director, Nosocomial Infection Control Unit, KGH; Director, Dept. of Laboratory Medicine and Infection Control, St. Mary's of the Lake Hospital; Chairman, KGH Infection Control Committee; Chairman, KGH Ventilator Associated Pneumonia Prevention Task Force; Member, HDH Infection Control Committee; Member, Joint KGH/HDH Antibiotic Utilization Working Group; KGH Transplantation Joint Practice Committee; KGH Accreditation Committee on Environmental Management; Chairman, KGH Neonatal ICU Line Associated Bacteremia Working Group; Chairman, KGH ICU Central Line Associated Infection Control Working Group; Member, St. Mary's of the Lake Professional Advisory Committee; Member, St. Mary's of the Lake Medical Staff Committee; Member, Pathology Lab Consolidation and Space Planning Committee; Member, KGH/HDH Microbiology Laboratory Procedures and Policites Review Committee; Member, KGH/DHD Microbiology Laboratory Management Committee; Chairman, St. Mary's of the Lake Hospital, Laboratory Medicine Management Committee; Chairman, Infection Control Service Meetings, KGH/SMOL; Member, Medicine Medical Mortality Committee; Member, Corrections Canada Infectious Diseases Inmate Advisory Committee; President, AMMO;

Secretary, Laboratory Medicine Section Councl of the Ontario Medical Association; Member and Leader of National Surgical Infection Surveillance Program, Canadian Hospital Epidemiology Committee; Laboratory Surveyor, CAP; Membjer, Ontario Ministry of Health, Laboratory Services Review Implementaiton Secretariate, HR; Member, Ontario Ministry of Health Laboratory Services Review Implementation Secretariate, HR; External Reviewer, Laboratory Center of Disease Control; Member, Community and Hospital Infection Control Association of Canada; Member, Board of Directors, Community and Hospital Infection Control Association of Canada; Member, Canadian Council on Health Facility Accreditation; Member, Clinical Practice Guidelines Implementation Working Group, CMA.

EDITORIAL BOARDS
AND
GRANT REVIEW COMMITTEES

OTHER SCHOLARLY ACTIVITY
EDITORIAL BOARDS AND GRANT REVIEW COMMITTEES

(Editorship of a journal, referee for journal or granting body, posters, productions, etc.)

Dr. S. Cole: Member, Medical Research Council of Canada Grants Panel, Cancer "B"; Member, Ontario Graduate Scholarship Selection Panel, Ontario Council on Graduate Studies.

Dr. C. Collier: Medical Staff Status - A Survey of Ontario Hospitals. Article for OSCC Newsletter; MoComp Articles for CSCC Newsletter. .

Dr. R. Deeley: Associate Editor, Biochemistry & Cell Biology; Referee, Biochem. Pharmacol., Cancer Research, European J. Biochem, FASEB, Genomics, Molecular Pharm., JBC; Reviewer, MRC, NCI, HSFO, UMDI, Canadian Medical Discoveries Fund, McGill University.

Dr. D. Dexter: Poster, "Cutaneous Metastasis of Oeophageal Adenocarcinoma, Presented at the Ontario Association of Pathologists Annual Meeting, June 1996.

Dr. A.M.V. Duncan: Ad Hoc Reviewer for: Ontario Ministry of Health, Hospital for Sick Children Foundation, MRC, NSERC, Manitoba Health Research Council, BC Health Research Foundation, NHRDP Alzheimer Society, Internaitonal Journal of Radiation, Mutagenesis, Canadian Journal of Genetics and Cytology, American Journal of Medical Genetics, Cytogenetics and Cell Genetics, Genomics, Genome.

Dr. B. Elliott: USAMRMC Breast Cancer Research Initiative Grant Panel; Reviewer - Cancer Research, J. Clin. and Exp. Metastasis, Invasion and Metastasis, J. Immunol.; External Referee - NCIC, Medical Research Council of Canada, Natural Sciences and Engineering Research Council of Canada, Canadian Diabetes Association, Canadian Rheumatoid Arthritis Society, Alberta Heritage Foundation, Saskatchewan Cancer Foundation.

Dr. S. Ford: Cardiovascular Tumour Panel, Canadian Reference Center for Cancer Pathology.

Dr. A. Giles: Ad Hoc Reviewer for Blood, Thrombosis Research, Thrombosis & Haemostasis, J. Physiology, Canadian Medical Association Journal, Clinical & Investigative Medicine, British Journal of Haematology, Thrombotic and Haemorrhagic Disorders, Medical Research Council of Canada, Heart & Stroke Foundation of Ontario, Physicians' Services Incorporation, Ontario, Canadian Red Cross Blood Transfusion Service, National Health Research & Development Program, Ontario Ministry of Health, Alberta Heritage Foundation, NSERC and International Society on Thrombosis and Haemostasis.

Dr. P. Greer: External reviewer for Ontario Thoracic Society, Hospital for Sick Children, US Israel Binational Science Foundation; Member, US Army Medical Reserach and Materiel Command, Molecular Genetics Panel 1; MRC, Cancer Panel A; External reviewer for Journals *Oncogene, Developmental Genetics, Cell Growth and Differentiation.*

Dr. R. Kisilevsky: Editorial Boards for: Amyloid, Int. Rev. Exp. Pathol., Laboratory Investigation; External Referee for Grants: M.R.C., Alzheimer's Society of Canad, National Institute of Health, USA, Ontario Mental Health Foundation; Referee for Journals: Lab Invest, J. Neurochemistry, Proc. Natl. Acad. Soc (USA), Journal of Rheumatology, J. Clinical Investigation, Scand. J. Immunology, Nature Medicine, Virchows Archives, Am. J. Pathology, J. Immunol., J. Lipid Res., Brain Research, Clin. Immunol. & Immunopathol.

Dr. D. LeBrun: Grant Reviewer on the following: Alberta Cancer board, MRC, NCIC< PSI Foundation, Hospital for Sick Children, Cancer Research Society; Journal Reviewer on the following: BLOOD, Oncogene, American Journal of Pathology.

Dr. D. Lillicrap: Member/Scientific Officer, MRC Genetics Grant Panel; Heart and Stroke Foundation of Canada External Reviewer - Operating Grants; Heart and Stroke Foundation of Canada Chairperson of Review Committee VII "Thrombosis and atherosclerosis"; B.C. Health Research Foundation, External Reviewer; Saskatchewan Health Sciences, External Reviewer; Clare-Nelson Bequest Fund, Queen's University, Internal Reviewer; Patient Related Equipment Grant, Internal Reviewer, Kingston General Hospital; Reviewer for the following: American Journal of Human Genetics, Human Genetics, British Journal of Haematology, Thrombosis and Haemostasis, Proceedings of the National Academy of Science, Nature Genetics, Blood, Transfusion, Haemophilia, Genomics.

Dr. S. Ludwin: Member Editorial Advisory Board, Neuropathology and Applied Neurobiology; Member Editorial Board, Acta Neuropathological; Member Editorial Board, Glia; Member Editorial Board, Human Pathology; Member Editorial Board, Modern Pathology; Member, 11Editorial Board, International Journal Surgical Pathology; Member, Multiple Sclerosis Society Grants Review Committee, Chairman, Grants Committee, Medical Advisory jBoard, MSS; President, Canadian Association of Neuropathologists.

Dr. D.H. Maurice: Review Panel Member, Ontario Graduate Studentship; Referee, Medical Research Council; Review Panel Member, Heart & Stroke Foundation of Canada; Referee, Journal of Biological Chemistry; Referee, Molecular Pharmacology; Referee, Can J Physol Pharmacol.

Dr. M. Richardson: Referee for Atherosclerosis, Experimental Molecular Pathology, NIH, Atherosclerosis Initiative, RFA.

Dr. L. Shepherd: Executive President, Canadian Association of Hematopathology; Hematopathology Examiner, RCPS; Advisory Group, National Red Cross and Provincial Ministry of Health, Quebec; Advisory Group on the Professional and Technical Issues in Transfusion Medicine, Health Canada; Participant NCIC Tumour Bank Workshop.

Dr. S. Taylor: Grant reviewer for Medical Research Council of Canada and the Alzheimer's Society of Canada.

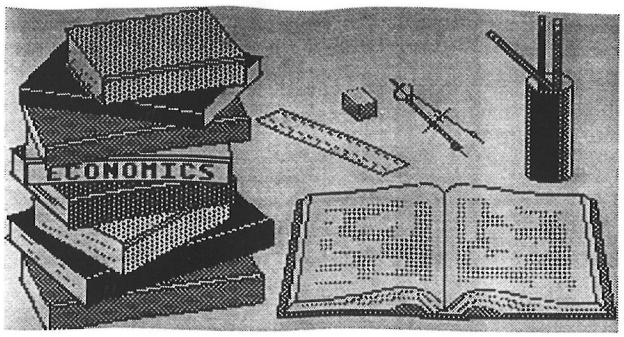
Dr. L. Tomalty: Referee, Canadian Journal of Microbiology; Examiner, Canadian Society of Laboratory Technologists.

Dr. S. Wasan: Reviewer, Canadian Journal of Ophthalmology, and Archives of Ophthalmology.

Dr. I. Young: Member, Pathology and Clinical Studies Panel J. National Cancer Institute of Canada.

Dr. D. Zoutman: Member, Editorial Board, Canadian Journal of Infection Control; Referee, Medical Research Council of Canada Grants Awards; and Referee, Canadian Journal of Infectious Diseases; Referee, Ontario Thoracic Society Grant Awards; Referee, Physicians Services Inc. Foundation Grant Award.

FULL PAPERS PUBLISHED AND IN PRESS



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