Dear Alumnus/Alumna,

Enclosed is:

1. the 2005 – ANNUAL NEWSLETTER of the QPA, and

2. a QUESTIONNAIRE with questions relating to the NEWSLETTER and other matters of QPA

Note the Abbreviations used:
AN - Annual Newsletter
KGH - Kingston General Hospital
HDH - Hotel Dieu Hospital
QU - Queen's University
DP - Department of Pathology at Queen's University
QPA - Queen's Pathology Alumni
DPMM – Department of Pathology and Molecular Medicine
RL - Richardson Laboratory
NCIC - National Cancer Institute of Canada
OCI - Ontario Cancer Institute

Please return your replies (by means specified elsewhere) to Mrs. Barbara Latimer, Department of Pathology and Molecular Medicine, Richardson Laboratory, Queen's University, Kingston, ON, Canada, K7L 3N6

PRIOR TO NOVEMBER 15th, 2005

Happy reading and thank you for your courtesy.

The Editors.

QUESTIONNAIRE

A. ASSESSMENT OF THE QPA-FIFTH ANNUAL NEWSLETTER: JUNE, 2005

NB: 1 = Best

Name (please print):	Yes ←----------→ No 1	2	3	4	5	No Comment
WAS THE NEWSLETTER OF INTEREST?						
Which parts did you enjoy: Foreward						
Editorial						
History (1991-2002)						
Neuropathology						
SARS-Experience						
Alumni News						
Departmental News						
Annual Report						

B. COMMENTS; SUGGESTIONS FOR FUTURE NEWSLETTERS?

(if not sufficient space, please continue on an attached sheet of paper)

_____

_____

_____

C. SUGGESTIONS FOR BROADENING OF QPA-ACTIVITIES?

_____

_____

_____

D. PLEASE PROVIDE THE FOLLOWING INFORMATION (please print):

1. Name:
2. **Current** Address:

3. Telephone: E-Mail: Fax:
4. What is your present position:
5. When were you in the Department (years: from _____ to _____).
6. Were you: resident ___; graduate student ___; research fellow ___; faculty___.

<u>PRIOR TO NOVEMBER 15, 2005</u>

Mrs. Barb Latimer, Department of Pathology and Molecular Medicine, Richardson Lab., Queen's University, Kingston, ON, Canada. K7L 3N6

Thank you for your courtesy

The Editors

ANNUAL NEWSLETTER
QUEEN'S PATHOLOGY ALUMNI (QPA)

JUNE 2005

Department of Pathology and Molecular Medicine,
Queen's University
Kingston, Ontario

Editors:
Drs. M. Daria Haust and Howard Steele

Co-Editor:
Dr. Robert Kisilevsky

CONTENTS

1. FOREWORD

Dear Queen's Pathology Alumni (QPA),

Several years ago I agreed that, when Drs. Daria Haust and Howard Steele step down as Editors of the QPA Newsletter, I would take on the role of Editor. That time will arrive July 1, 2005.

My first happy task, on behalf of the QPA, is to thank sincerely Daria and Howie for their dedication and effort in conceiving the idea and in cajoling many of us to provide material for its annual dissemination. Through their efforts many of us have re-established contact with former colleagues, residents and students, a departmental historical record covering a period of more than 60 years has been documented, and the origin and roots of several of the Department's notable successes have been described. Without Dr. Haust's sensitive and persistent prodding, and Dr. Steele's quiet and behind the scenes support and advice, little of this would have come to pass. They both deserve a grateful "thank you" from all of us.

The change in Editor-ship provides an opportunity, not to change the substance of that which has been established, but to change the means and frequency of communication between the alumni and the Department. Rather than communicating with each of you once yearly via the AN, current technology allows communication more easily and in a more timely fashion. Following my letter of March 2005 requesting an e-mail address, approximately 2/3 of those who responded provided one. The majority of the alumni can therefore be reached by a simple means and notified of departmental reports, issues and events that might be of interest to all. Furthermore, alumni will be able to use e-mail to send the Department newsworthy items (text and/or photos) that they wish to share. For those of you who do not have access to e-mail we will continue to collate and summarize news-worthy material and distribute it, once or twice a year, by regular mail, as has been done in the past. Details of the mechanics of the electronic communication are outlined below.

With the help of Mr. Kevin Kell, a QPA web page has been constructed as a sub-page of the Department of Pathology and Molecular Medicine's (DPMM) home page. Access to the QPA web page is available through the internet either by going to www.path.queensu.ca and then choosing the link to "Alumni", or directly to the sub-page by going to www.path.queensu.ca/alumni. For the time being, and until additional material becomes available from you the alumni, or the Department of Pathology, the following items will be available on the QPA web page:

1) QPA Annual Newsletters
2) KGH Department of Pathology and Molecular Medicine Annual Reports
3) Queen's, Department of Pathology and Molecular Medicine Annual Reports
4) A listing, and details, of the Daria Haust Lectureship speakers
5) A listing, and details, of the Nathan Kaufman Lectureship speakers
6) Department of Pathology historical photos

As additional current issues of the QPA AN and Annual Reports of KGH and Queen's DPMM become available, and our historical photo album is expanded, these will be posted and those of you with e-mail addresses will be so notified. Departmental events of interest to alumni, such as lectureships, notable achievements and publications, and births, marriages and deaths will also be posted provided you send us the details. We hope to do so monthly. You will be able to access

the additional material by using the address and links listed above. You may print hard copies at leisure at your offices or homes if you wish. Needless to say you may access the site at any time, or as frequently as you wish. Communication will therefore be much more frequent and timely than it has been in the past.

Whether or not you have an e-mail address we encourage you to send newsworthy items (text or photos) to the following address, alumni (at) cliff.path.queensu.ca or hard copies to the DPMM. Following the vetting for content we will post these items in the QPA web page. Hard copies of photos can be scanned in the Department of Pathology to create an electronic version for posting.

To protect privacy our master list of e-mail addresses will not be on the QPA web page. Should any of you wish to learn the address of a colleague please notify us at alumni (at) cliff.path.queensu.ca. I also encourage you, should you make contact with long lost QPA colleagues, to let us know and to send us the address where they may be reached.

I look forward to working with all of you to make the QPA a continuing success.

Bob Kisilevsky

2. EDITORIAL

Just as everything in life has a beginning and an ending, this EDITORIAL signifies an end to the current editorial "mandate" for the ANNUAL NEWSLETTER (AN) of Queen's Pathology Alumni (QPA), but luckily not an end to the NEWSLETTER. With the new academic year (July 1, 2005) this assignment will be taken over by a single new Editor, Dr. Robert Kisilevsky (Professor Emeritus of the Department at Queen's). He will be applying modern techniques in gathering the news about and the activities of the Alumni, and disseminate this information by efficient means to those Alumni who will remain interested in the activities of the group's members.

There is no denying that the end of the present era that began with the desire to found the QPA and to issue of an AN, evokes a certain nostalgia, but also calls for a reflection of the goals and aims of the above initiative and the degree of their realization.

Prior to addressing the above, one statement by the outgoing Editors should be pleasing to all readers: there will be no longer a bulky long AN, of many typed pages reaching the Alumni, but instead, the contents will be accessible by a much easier means and more attractive format (see FOREWORD).

Reflecting on the beginning of the Alumni story one recalls that as early as in 1984 the intention to form this group was discussed and details were to be explored during a sabbatical leave of absence to be spent in the Department (1984-1985) by an Alumna. The original idea, while postponed, was not forgotten, as it was firmly believed that because this was a department par excellence, there must be others who valued and cherished their time here enough to warrant a continuance of contact by communications and fellowship. An unofficial opportunity for discussions with a considerable number of former "trainees" presented itself at the time of the Annual Meeting of the Ontario Association of Pathology (OAP) in Kingston (Oct. 1993) on the occasion of the reopening of the renovated Richardson Laboratory (1990-1993) to which the Department "invited all Alumni to attend for the first reunion". Approximately 50 colleagues attended, enjoyed the program and the renewed fellowship. Enquiries were made to assess how many of all who passed through the Department would be interested in receiving relevant news on a continuing basis and enjoying each others company from time to time at reunions. There was much work put into the process of identifying and obtaining the addresses of those who spent time here. After several faltering attempts since the OAP meeting (1993), an address registry was obtained and the first attempt at outreach to these people resulted in the mailing of an enquiry letter to 406 Alumni in July 1995. People on the list included those aiming at a career in Pathology or other disciplines in medicine who spent time in Pathology as a basic science for their career, as well as postgraduate students who took MSc and PhD degrees related to Pathology.

The vision for the Alumnus Group included the hope that such association would continue to develop the strong bonds between people closely associated while in the Department over several years. This could only occur if those people had enjoyed and profited from their experience and the general feeling was that such was the case. Needless to say, not all people had the same experience for either personal or other reasons, but this could only become evident from a survey to follow.

Attached to the July 1995 – enquiry letter (signed initially by intended members of a small committee: Drs. Sandy Boag, Alan Fletcher, Daria Haust and Howard Steele) was a simple questionnaire, exploring the desirability of timing and place of reunions and the establishment of an AN. Of the 406 mailed letters, 100 were returned as "address unknown", and of the remaining 306, 157 members answered the questionnaire. Almost 100% of the replies favoured the establishment of an AN and most suggested that it be on an annual basis.

The purpose of the AN, as outlined in the first, 2001 Annual-issue was three-fold: to compile and provide historical record of the Department, to seek items of interest from alumni and pass them on to others, and to keep people up to date about the Department and its personnel. Subsequent editions of the AN's (2002; 2003; 2004) have continued in this spirit and a good historical record has been collected. Moreover, this Newsletter provides two missing but important sections (the years: 1991-2002; Neuropathology), thus completing the history of the Department extending from the post-WWII to the present time.

Naturally, it is to be expected that the history of the Department cannot be entirely correct or absolutely complete, as required records were neither available (any longer?) in the Dean's (Medicine) or the hospitals' (KGH and HDH) offices. Thus, the Editors' reporting was often anecdotal and/or based also on the memory of colleagues. With the history completed as best as it was possible, this seems an appropriate time to turn the attention to the next tasks as set-out, and the involvement of a new Editor and a small group of volunteer Alumni who offered in the last returned questionnaire to devote their talents to the advancement of the Alumni goals. A letter addressed to these generous Alumni is being mailed to them along with some thoughts, and hope that with their input and efforts the QPA's activities will be invigorated and the established contacts will prove to be long-lasting.

The Editors, who will remain as Co-Editors in a supportive/advisory role for a short while, wish to convey their appreciation for the encouragement, cooperation and support to many colleagues. This includes Dr. Paul Manley and Dr. Iain Young, i.e., the two Chairs of the Department of the period, for their efforts to establish and develop meaningfully the "Alumni-Project". A warm appreciation is also conveyed to Mrs. Barbara Latimer and Mrs. Linda Oster of the Department, who devoted selflessly much time and loyalty in support of the demanding "Alumni-Project".

Finally, it is perhaps permissible for the Editors to express jointly their gratitude for the opportunity (and for the pleasure!) of working in unison over a decade for a common cause of our Department.

Daria Haust and Howard Steele

3. SUMMARY OF REPLIES TO QUESTIONNAIRE-2004

a) The following table shows the results of the questions that were asked, and gives some indication of directions that might be pursued.

		YES	NO	No Comment
1.	Are you in favour of establishing an Executive Committee for continuous expedient functioning of QPA?	52	13	17
2.	If yes to #1, would you volunteer to serve?	7	54	21
3.	Would you consider supporting QPA-activities by an annual ☐ or single ☐, tax-deductible donation?	47	19	16
4.	Are you in favour of a more frequent mini-reunions of Alumni at CAP ☐ or USCAP ☐ –annual meetings (socially)?	34	25	23
5.	Would you agree to have your name and address included in the QPA-membership list for distribution only to QPA?	65	6	11

b) Summary of Questionnaire (2004) Comments and Suggestions:

1. Compliments for effort, content, photos and staff encountered during training.

2. Several suggestions for an E-Newsletter and e-mail to members when it is available.

3. When history completed, QPA needs could be met on DPMM Web Site with quarterly Newsletter and alumni receptions at CAP/USCAP meetings. Or news could be disseminated as available on Web Site.

4. Make Newsletter shorter and lighter.

5. Alumni – where are they now?
   - addresses?

6. Alumni news contributions and photos.

4. DEPARTMENTAL HISTORY (1991-2002) – Dr. Paul Manley

Introduction:

Paul Manley succeeded Robert Kisilevsky initially as Acting Chair in 1991 and then as Chair in 1992. He was the Director of Laboratories of the Kingston General Hospital (KGH) from 1987, and also assumed the ex-officio position of the Pathologist-in-Chief of the Hotel Dieu Hospital (HDH). This was the first time in the modern Department's era that the Head of the University and the Directorship of the Hospital Laboratory were held jointly.

The 11 years of Dr. Manley's tenure as Chair were marked by funding crises generated by a growing provincial deficit, the dramatic transition from the NDP to Tory government and the continued governmental unwillingness to raise tuitions. There was intense pressure on the university finances leading to a multi-year decrease of Queen's budget by approximately 12%, and continuing pressures to maximize efficiency within the hospital. Our Queen's Department cut 1 ½ secretarial, 2 technologist's positions and two Faculty positions were reduced up to 75% time. This difficult transition was eased by the increasing use of information technology and word processing by individual faculty members, the phasing out of our specimen museum and student slide collections, and the progressive decline in the use of electron microscopy, as all of these aspects required significant technical assistance.

The challenge for the Department during the 1990s was to attract high quality faculty members, to provide an environment in which they could be productive, and also acquire the appropriate technology and space for the Clinical Laboratories. However, the deteriorating research space in Richardson Laboratory (RL) and the hodge-podge of laboratories at the KGH increasingly failed to provide these conditions. By 2002 RL had been entirely redesigned and rebuilt; the laboratories at the HDH and KGH had been totally amalgamated in a newly renovated functional space on Douglas 1 to 4, and several multidisciplinary research groups, previously initiated by the Department in the areas of Cancer Biology, Hemostasis and Amyloidosis, became extraordinarily productive in expanded new research space.

The other major current buffeting us through the '90s was the forced conversion throughout Canadian medical undergraduate education from a specialty lecture-based curriculum in which Pathology had a large and visible role, to an organ-based problem-oriented curriculum. In the latter, the courses in Pathology were limited to general themes in Year 1 and our visibility was dramatically reduced in subsequent years. This coincided with mandated changes of postgraduate education such that students were forced to decide on their ultimate careers in their second and third years of medical school. Consequently, a variety of specialties, and particularly Pathology, suffered a marked reduction in applicants. This problem was exacerbated by a nationwide decision to cut the number of medical training positions in Canadian schools by 10% and restrict the entry of foreign-trained physicians through provincial licensure into our health care systems. Our residency program plummeted from a peak of 21 in the '80s to 2 in 2002.

Faculty and its Major Accomplishments:

During the 1990s several major stalwarts of the Department, Drs. Bill Corbett, Alan Giles and Bob Prentice, took early retirement . Dr. Frank McElligott took a leave of absence to become a hospital Medical Director in British Columbia, Dr Sukriti Nag accepted the Headship of Neuropathology at the University of Toronto and Dr. David Robertson retired. The above losses

were tempered by the wonderful new faculty we attracted at a time when many applicants were vying for the available positions. In 1994 we appointed Drs. John Rossiter, one of several MD PhDs applying for the position in Neuropathology, David LeBrun after he spent several years of research at Stanford and David Hurlbut who completed a year of Fellowship in gastrointestinal pathology in Boston. Dr. Caroline Rowlands joined us a year later replacing Dr. Santosh Wasan and brought to the Department her expertise in Dermatopathology. Dr. Dilys Rapson advanced from a half-time (1997) to a fulltime appointment by January 1, 2002, succeeding Dr. Alan Giles as Director of Hemostasis and then Dr. Lois Shepherd as the Director of Hematopathology. Drs. Alan Fletcher and Sally Ford, who took early retirements in 2002, were replaced by Drs. Tim Childs and Phil Isotalo.

Dr. Roger Deeley was awarded the Joseph Stauffer Chair to develop and lead the Cancer Biology Research Group in 1987 and switched his primary appointment to Pathology. Dr. Susan Cole also switched her primary appointment to Pathology from Pharmacology in 1996, all the while being supported by CCO. Together Roger and Susan have developed a world famous programme in drug resistance in cancer. The Group was initially supported by NCI Terry Fox funds and subsequently through a combination of the Cancer Care Ontario (CCO), the NCI and MRC -provided scholarship positions. A large number of the superb scientists of this Group had to be "moved" over the 1990s from soft to hard money positions. This was most dramatic in Dr. Bruce Elliott's case. He maintained research scholarship support from the NCI for 15 years and subsequently had to be supported by 'hard' departmental Queen's funds derived from a sharing of Faculty of Medicine resources and Queen's MD salary income segregated for that purpose during Bob Kisilevsky's era. Dr. Peter Greer, appointed in 1991, obtained a tenure-track (hard money) position from the Department of Pathology 10 years after his initial appointment. Two primary appointees in our Department, Dr. Martin Petkovich and Dr. Chris Mueller, left to acquire tenure-track positions in Biochemistry.

Dr. Alan Giles, through the Distinguished Research Professorship of the Heart and Stroke Foundation of Ontario was able to attract and support Dr. Don Maurice. Our Department provided salary support for two years and then Don acquired the highly competitive sole Canadian Pharmaceutical Association of Canada/MRC scholarship providing him with an income for 5 additional years. Don had to switch his primary appointment to Pharmacology to acquire a tenure-track position. During that era, Alan also supported Mary Richardson, a PhD with research expertise in hemostasis and electron microscopy, for approximately 7 years. Alan was crucial in attracting other members of the hemostasis group including Drs. Mike Nesheim from the Mayo Clinic and Marlys Koschinsky from Genentech. Both found homes in Biochemistry at Queen's. Most significantly, Alan was an important mentor and supervisor of David Lillicrap who developed a superb programme in von Willebrand's disease and is investigating gene therapy for hemophilia. The Department has thus become an important nucleus in the evolution of multidisciplinary groups in research. Our major role was to attract and support brilliant and entrepreneurial investigators and remove any impediments as they acquired funding and space.

Dr. Dick Zoutman replaced Dr. Paul Chadwick. Initially, his primary appointment was in Microbiology and as Director of the KGH Microbiology Laboratory and the Head of the KGH Infection Control Service with a cross-appointment as an Infectious Disease physician in the Department of Medicine. In 1994 his primary appointment shifted to Pathology. Dr. Gloria Delisle took an early retirement from our Department as Head of the Combined KGH/HDH

Microbiology Lab in 1999 and was replaced by Dr. Tim Karnauchow . Dr. Karen Harrison succeeded Dr. Alessandra Duncan as Head of Cytogenetics in 1997 and Dr. Sherryl Taylor replaced Dr. Peter Bridge as Director of DNA Diagnostics in 1992.

In 2001 the Faculty of Health Sciences and KGH implemented the recommendations of a Genetics Review Team chaired by Dr. David Lillicrap to integrate clinical and laboratory genetics within the Department of Pathology, which had increasingly become the major focus of academic achievement in genetics. Dr. Mohamed Khalifa, a clinical geneticist, and Lois Mulligan, a PhD-researcher with expertise in the RET oncogene, transferred their appointments to our Department in 2002. Dr. Harriet Feilotter, a clinical molecular geneticist/researcher, joined the Department in 2001 and her appointment was later made permanent when she formally replaced Dr. Jennifer Raymond who took early retirement. Harriet's focus is predictive cancer testing in the Molecular Diagnostics Laboratory and developing our Microarray Laboratory. We also acquired the administrative responsibility for the entire Clinical Genetics Unit including four genetics counsellors and a newly endowed Bracken Chair in Genetics with a capital endowment of $2.5 million.

Major Faculty Accomplishments:

Between 1991 and 2002 Drs. Roger Deeley, Susan Cole, David Lillicrap and Bob Kisilevsky were awarded the Queen's University Prize for Excellence in Research. With our previous awardees, Drs. Adolfo DeBold and Alan Giles, a total of six departmental researchers have won this award, more than any other department in the entire University. David Lillicrap and Susan Cole were amongst the first at Queen's University to receive a Tier I Canada Research Chair. Robert Kisilevsky received the Boyd Lectureship Award in 1992 (the highest honor bestowed by the Canadian Association of Pathologists) and the Claude P. Beaubien Research Award of the Alzheimer's Society of Canada in 1996 and Susan Cole became a Fellow of The Royal Society of Canada. Many members also held major executive positions, e.g., Samuel Ludwin served as the President of the International Society of Neuropathology, Sandip SenGupta as the President of the Canadian Association of Pathologists, Paul Manley as the Head of the Canadian Chairs of Pathology, and Roger Deeley as the Research Director for Cancer Care Ontario.

Individual and group research accomplishments included the discovery and characterization of multidrug resistance protein (MRP1), a major transmembrane transporter that confers drug resistance, by Roger Deeley and Susan Cole, and the founding of Neurochem, Canada's largest ever biopharmaceutical IPO based on the curiosity directed research of Bob Kisilevsky. Equally important was the progressive success by the other active researchers in our Department. At the time of the Internal Academic Review in 1997, Queen's University Research Adminstration provided the following comparative Queen's Departmental data.

	Average Yearly Funding/ Funded Member
Pathology	172,948
Biochemistry	120,839
Pharmacology	94,353

	6 year (92-98) Total $ Funding
Pathology	14,658,079
Biochemistry	11,170,132
All Clinicians	10,203,099

According to our survey amongst Departments of Pathology in the country, our departmental funding was also the highest per faculty member in Canada. This reflects the aggregate achievement of multiple individual members of the Department. It's also an affirmation of the

departmental policy of focusing research expectations on a limited number of extraordinarily gifted individuals, and granting them the time, space and some of the tools to succeed.

Education:

Our major challenge in the '90s was the undergraduate and postgraduate education in which we have had only limited success. Samuel Ludwin, as the departmental Vice-Head (Education) had to grapple with the problems common to most Canadian and US Departments of Pathology, following the forced conversion of the departmentalized curriculum into a decentralized, problem-oriented organ-based approach, and the decreasing number of residents within the postgraduate programs.

Our involvement in undergraduate education became defined extra-departmentally by organ-based groups, each setting a curriculum for their respective system and then deciding who would be involved in their lecture and seminar programs. In some systems, such as neurological sciences, we played a large role but in others our involvement was minimal. This new Faculty-based curriculum effectively took the organization of a major part of the undergraduate teaching out of the Department's domain and placed it into the hands of diverse members of multiple departments. Some successes of our Department within the new curriculum include organ-based seminar teaching using plastinated specimens and the integrated Basic Science and Clinical Medicine of the Medical Science Round for first year students. We maintained the breadth of our curriculum through the teaching in Rehabilitation Medicine, Nursing and especially in the Life Science and Graduate Programs. An extraordinary continuing success has been the development and presentation of an annual enrichment program for exceptional high school students. It offers two one week courses in Pathology and Molecular Biology and has been organized by one of our graduate students and frequently a resident. This course was the most highly subscribed in the entire university, and most highly appraised by the students.

Our Postgraduate Education Program's residency positions decreased from 21 in the '80s to a low of 2 in 2002, reflecting the decreased number of Canadian medical students, the exclusion of most foreign medical graduates, the perceived lack of jobs and income in Pathology in the late 1990s, the aforementioned reduction in postgraduate training positions, and the change in licensing requirements. Decisions on selecting a specialty for the future were usually made by students in their second and third year when their exposure to Pathology was minimal.

Our Graduate Program evolved through the success of our researchers, with the number of graduate students increasing from 10 in 1990 to 29 in 2002. The graduate students are focused predominantly on research in Cancer Biology and Hemostasis.

Kingston Hospital Clinical Laboratories:

Critical to the success of any clinical laboratory are the number and quality of its staff, the instrumentation and process organization to enable industrial efficiency, and a pleasant working environment. My major goal as Director of Laboratories at KGH from 1987 was to transform the laboratories from their hodgepodge of isolated spaces with no relation amongst the Departmental Faculty, the Clinical Services in the KGH and the RL to a clearly functional entity. By 2000 both HDH and KGH hospital laboratories had been integrated, occupying the totally renovated space on Douglas 1 to 4, with most floors in very close spatial and functional relation to our Faculty and to the clinical services. This plan was broadly developed in the late 1980s as

a functional space plan, but there was little hope at the time of realizing it. The Anatomic Pathology laboratory was located on the second floor of the KGH in close relation to the Operating Room (OR) and the faculty offices were placed between the OR and the combined Cytology/Histopathology laboratory with easy access to clinical colleagues of related disciplines and to our cytotechnologists. The Microbiology Laboratory (ML) was placed on the 3rd floor with the clinical microbiologists and all infection control services occupying the space between the ML and the hospital. The corridors on all floors were blended architecturally and decoratively with the adjacent sections of the hospital to minimize perceptual barriers between us and our clinical colleagues. Clinical Genetics, Laboratory Genetics, including Cytogenetics, DNA and Biochemical Genetics were to occupy the entire 4th floor, with easy access to the hospital and to the research space in RL.

During the early 1990s the KGH and HDH held many meetings related to laboratory rationalization. In spite of the title of Pathologist-in-Chief bestowed upon the Head of the Department, the authority at the HDH was firmly held by the hospital administration. The frequent joint rationalization discussions were frustrating, and had minimal tangible success. The Outreach Programme was operated out of the KGH, with no initial involvement by choice of the HDH faculty. The Program was expanding rapidly at that time. We won competitive contracts for Smiths Falls Hospital, Correctional Services, Kingston Psychiatric Hospital (KPH) and reference work for the Oshawa/Peterborough hospitals. Correctional Services and KPH were later lost to commercial industries in subsequent competitive bidding. The volume continued to increase from our largest client/partners, i.e., the regional hospitals, Ongwanada, the Canadian Forces Base Kingston, and later MDS.

The success of our Program was due to the quality and efficiency of the services provided to these hospitals. We offered a reference laboratory service at a price equal to or better than that offered by competitors, a departmentally administered daily courier system, and a rapid report delivery system that evolved, albeit with some difficulty, into on-line computer reporting. The KGH wisely devolved the entire responsibility for operation of the Program to us. This included regular meetings with regional hospitals and their chief administrators, the development and signing of the contracts, and the management of the courier system. The major strength of our Program, considered the best in Ontario, was our regular on-site visit by Pathologists, Clinical Chemists and, in the last few years, by Hematopathologists to provide significant subspecialty expertise. At the same time surgical specimens from hospitals in Napanee, Picton, Perth/Smiths Falls and the Canadian Forces Base, and from area dermatologists were given focused subspecialty expertise attention and a rapid turnaround time . Dr. SenGupta provided overall strong administrative support for this Program and has recently further enhanced the subspecialty focus.

The Program brought multiple benefits to the technical hospital laboratory by enhancing the total volume of our industrial plant by approximately 15% while requiring no change in instrumentation and a relatively small increase in staff. As pathologists we acquired approximately 25% more surgical pathology work and large increases in Cytology from MDS. After 1987, the major administrative change in this Program was billing at market rates for our faculty's time spent as directors on site, and per specimen for both the technical and the professional work. We proposed sharing the net profit equally between the Department and the KGH. This concession on profit sharing by the hospital required multiple high level administrative meetings and then direct negotiation with the KGH Board. However, until 1997

the VP Operations in charge of our laboratory refused to relinquish any part of our share to the Department. After persistent administrative wrangling, KGH agreed in 1997 that the departmental share of $1,000,000 be turned over to the Department and form the basis of our Clinical Research Trust. We subsequently developed a new fiscal relation with the KGH. KGH kept all of the technical fees and we retained all of the professional and directorial fees, while continuing to administer the Program. In 1994 our relationship evolved more smoothly with HDH and we were allowed to bill OHIP through the Hospital-in-Common Laboratory (HICL) for professional and technical fees of referrals for Anatomic Pathology consultations in Dermatology and Cytology. The Ministry of Health arbitrarily stopped these HICL payments in 1997. Queen's Hospital Pathology Associates, a clinical practice group similar to those of most Pathology departments of the United States was constituted to recommend the use of these Outreach funds.

In the 1990s the frailties of the Kingston Joint Liaison model became much clearer when our two major hospitals, the HDH and the KGH, were unable to define any further meaningful rationalization of services. By 1997 however, the funding pressures, and a change in the political environment whereby a recently constituted Restructuring Commission could potentially mandate changes, resulted in our two hospitals reaching an agreement. KGH was designated as the acute care in-patient hospital and Hotel Dieu an ambulatory facility, but both would maintain their integrity and administrative authority. Prior to any mandate delivered by the Restructuring Commission or Provincial lab review, the HDH agreed to proceed with laboratory restructuring. We quickly put into place our 1980s functional plan with the uncharacteristically rapid and full support of the KGH. We proceeded, initially, without formal architectural plans to develop our clinical laboratories progressively, from Douglas floors 1 to 4 while keeping full clinical services operational. The major planning direction and project management of this Program fell to our then Administrator David Piper. All of the reconstruction funds were provided by the KGH and indirectly by HDH through significant annual savings in the lab budget which amounted to approximately 18% or 2.5 million dollars. Unions agreed to merge their seniority lists so that all members were treated fairly. Management was merged and rationalized. Although the number of part-time employees significantly decreased, no fulltime members were discharged. Some staff members took early retirement with the aid of a generous HOOPP benefit package. The laboratory at the HDH, constructed for 2.5 million dollars in 1993 without any planning input from or discussion with KGH, provided a source of superb laboratory equipment. Over the next 2 years we developed excellent functional space on our upper floors of Douglas Wing but had to compromise to accommodate the Core Laboratory in a small space on Douglas 1. Our efficiency became the best in the country for any academic health science centre and our work places in Histology, Microbiology and Genetics were very well-equipped and pleasant. At HDH the laboratory personnel were reduced from 50 to 1 in a STAT testing lab which served the ambulatory clinics and Emergency Department.

The amalgamation of the KGH and HDH laboratories allowed our faculty members, especially those in Anatomic Pathology directed by Dr. Iain Young, to further focus their subspecialty groupings and enhance their expertise and efficiency. Former HDH faculty were now fully involved in the Outreach Program and in the managerial direction of segments of the Anatomic Pathology laboratory: Dr. Caroline Rowlands as the Director of Cytology, Dr. David Dexter succeeding Sally Ford as the Head of our Regional Forensic Pathology Group, and Dr. David Hurlbut leading in GI Pathology. Dr. Gloria Delisle directed the combined Kingston Hospitals Microbiology Laboratory. Our success in the late 1990s soothed the acrimony of the preceding

10 years, which included the firing of a KGH President and VP Operations, and the 1996 suggestion by Hugh Graham, the Executive Director at HDH that Paul Manley's appointment as the Head be terminated. In 2000, along with London and Ottawa, we joined Hamilton and Toronto as Regional Forensic Centres. Our negotiations with the Ministry provided us with $150,000 per year. Some of these funds were used for a major new renovation of the Autopsy Suite. Other funds support the maintenance of this unit and the enhanced focused forensic expertise within the Department.

The acquisition and use of information technology was critical to the success of the clinical aspects of the Department during this period. The first Laboratory Information System was bought in the 1980's and upgraded in 1993. With the continued involvement of a team including David Piper, Mike Raymond, Sandy Boag and Kevin Kell, we have been able to introduce and maintain modifications to provide a variety of sophisticated desktop aids to the Department including Web Imaging and our own Network, the first such departmental network at Queen's University. It is important to emphasize the special qualities of many of our staff whose talents were critical to our success. I especially think of David Piper's role in the development: planning and hands-on management of the RL and KGH laboratories, the finances of the Department and of our evolving computerization; Kevin Kell's extraordinary computer support and guidance; Lloyd Kennedy's expertise in digital imaging, and Blake Gubbins' development of Canada's first plastination lab.

Construction of Richardson Laboratory:
The structural deficiencies of RL were granted high priority for renovation in the early 1990's. The University, at Dean Sinclair's urging, came up with an innovative proposal by bringing forward renovation funding from subsequent years into the year 1992 and renovating the building entirely at one time rather than, as initially planned, one floor at a time. We worked extraordinarily closely and firmly with the architects and with departmental members to develop functional offices and research and teaching space that would meet the needs of existing members. The Department was 'accommodated' in the old renal unit space (now occupied by the Anatomic Pathology Laboratory) and researchers occupied temporary space in Etherington Hall and the LaSalle Building, while their research work expanded into the Syl and Molly Apps KGH research wing and to Botterell Hall. At its completion we had functional, well-equipped open laboratories utilized predominantly by the Genetics group. The increased RL research space allowed us to provide research facilities for cross-appointees in the Department from Paediatrics as members of the Genetics Group, including Lois Mulligan and Mohamed Khalifa, (who were later integrated into our Department), and to the Neuropathologists and David LeBrun. The new facility was formally opened at a Richardson Reunion Weekend Gala with participation of some former faculty of the Department during a joint meeting with the Ontario Association of Pathologists in 1993.

The opening of RL provided the impetus to begin a formal program of celebrating the contributions of past departmental members and for accelerating the evolving Queen's Pathology Alumni Group. Our specially designed library, encompassing quiet reading areas and well equipped computer facility for students and staff, was named for Dr. Robert More. Lectureships were set up, first for Dr. Nathan Kaufman and then Dr. Daria Haust. Eighty-fifth and eightieth birthdays, respectively, were used as occasions to celebrate with Drs. Bud Kipkie and Howie Steele. The work of the Queen's Pathology Alumni (QPA) stimulated by Dr. Daria Haust began with the publishing of biographies and histories of the Department and its major divisions.

During the periods of significant funding shortfalls in Ontario in both the university and hospital budgets, the Department was able to accumulate discretionary funds. Our sources included overhead from a small group of very successful researchers, including Alan Giles, Bob Kisilevsky and David Lillicrap, and from the NCI Tissue collection contract competitively won from the University of Ottawa. This money was segregated within our Queen's budgets. The trust fund begun at the KGH had accumulated one million dollars by 1997. This was endowed as a Clinical Research Trust. The HDH Clinical Research Trust Fund by 1997 had accumulated $430,000 and with accrued interest was recently transferred to a Pathology Head's Trust Fund for discretionary support of departmental activities. In addition, a small number of donors, especially Dr. Daria Haust who endowed our first trust fund, have been very generous to the Department. By 2002 the Department had approximately three million dollars in Queen's endowed Trust funds used to support a wide variety of scholarly activities in the Department.

Between 1991-2002 the Department continued its tradition of focused expertise in basic research, now more than ever within evolving multidisciplinary groups. Our University and Hospital facilities were totally renovated and functionally integrated. Our professional inter-relations continue to deepen throughout the region where we are increasingly engaged as subspecialty medical experts, and for managerial and technical support in all the laboratory disciplines. Throughout this period our managerial structures had become significantly devolved, e.g., the Head may serve e*x-officio* on many committees, but the *de facto* authority was assumed by the committee chairs. In the KGH a formal functional structure was established in 1991 with Divisions of Clinical Chemistry, Hematopathology, Anatomic Pathology, Microbiology and Laboratory Genetics. Each of these Divisions had their own medical/PhD director and manager. The number of formal divisional meetings increased while there was a dramatic decrease in the overall departmental Queen's and KGH meetings. More useful business was accomplished in focused meetings and information was made available by e-mail or through the development of our Pathology Newsletter. This management allowed us to accomplish much more within Divisions and thus collectively as a Department. However, it also contributed to divisionalism, a bureaucratic manifestation of our response to complexity. We've become larger, more complex and successful, but less cohesive.

5. INVITED CONTRIBUTIONS:

a) Neuropathology at Queens' University 1960s-mid 1990s Personal Reminiscences

The Neuropathology Staff

Most of you are familiar with the contributions of Dr Robert More to Pathology at Queen's University (QU) and to Pathology at a national and international level. The way it was told to me, Neuropathology at QU is also indebted to Dr More. In the 1960s Dr More recognized the need to develop Neuropathology and encouraged a young pathology resident – Dr David M. Robertson to train in Neuropathology. David, a native of Melville, Saskatchewan was a medical graduate of QU (Med's 1955). After being qualified in General Pathology by the Royal College of Physicians and Surgeons of Canada (RCPSC) in 1960, David trained in Neurology at Toronto General Hospital with Dr Henry Barnett. He then started his Neuropathology training initially at the National Hospital, Queen's Square, London with Professor Blackwood, interacting also with Dr Bill Mair, an Associate Pathologist. He continued his Neuropathology training at Duke University Medical School in Durham, North Carolina with another renowned Neuropathologist, Dr Stephen Vogel. Dr Vogel must have made an impression on David because years later I would hear anecdotes about Steve. In 1962, Dr Robertson came back to QU and Kingston General Hospital (KGH) and started his career in diagnostic Neuropathology, teaching and research. One year later his classmate Dr Henry B. Dinsdale who was also back from Queens' Square, started his Neurology practice at QU and KGH with Dr Dennis White. The disciplines of Neurology and Neuropathology are interdependent and this was the start of a strong Clinical Neuroscience presence at QU. The first RCPSC examination in Neuropathology was held in 1968 and David was among those writing the examination, along with Drs Barry Rewcastle, Clarissa Dolman, and Gordon Mathieson. About 10 years later he became a diplomate of the American Board of Pathology in Anatomical Pathology and Neuropathology.

One cannot overestimate the impact that Dr. Robertson had on Neuropathology at Queen's and indeed in Canada and abroad. Within a few years he had established an exemplary division, with excellence in clinical diagnosis, research and teaching. He also set the stage for academic neuropathologists with successful competitive funded research programs, and a thriving undergraduate and postgraduate educational program. He was also instrumental in founding the specialty of Neuropathology in Canada. At one stage fully a quarter of all neuropathologists in Canada had some or all of their training at Queen's. Standards that he, Dr. Rewcastle, and Dr. Dolman laid down in those early stages for training, have been the bedrock of the development of Neuropathology in Canada up to current times.

As Neuropathology grew the need for a second Neuropathologist became apparent leading to the appointment of Dr Herbert J. Manz as Assistant Professor and Neuropathologist in the Department in 1970. Herb, another native of Saskatchewan, did his Medical training at the University of Western Ontario. He entered the General Pathology training at McGill University, and later Neuropathology training and graduate work leading to an MSc degree at QU with Dr Robertson. Herb was also a diplomate of the American Board of Pathology in Anatomical Pathology and Neuropathology. In 1974, Herb left for Georgetown University, Washington, DC. Residents found Herb to be thorough, examining every cell in the large brain sections, so sign-

outs took many hours. He was not without a sense of humour however, and both winces and peals of laughter were heard in response to the puns he frequently used.

In 1975, Dr Samuel K. Ludwin was recruited to QU as Assistant Professor and Neuropathologist. He almost did not come because during his exploratory visit to QU, David, a trained commercial pilot and flying instructor, took Sam flying in a Cessna to show him the countryside, while Sam had a horror of small planes, but was too polite to refuse the ride. Sam was an excellent addition to the Neuropathology Staff. A native of Johannesburg, South Africa he did his medical training there and in 1970 moved to California and trained in Pathology at Stanford University Medical Center. He was among the fortunate few to train with the legendary Dr Lucien Rubinstein. Sam had a FRCPC in both Anatomical Pathology and Neuropathology and was a diplomate of the American Board of Pathology in Anatomical Pathology and Neuropathology. He was energetic, enthusiastic, a gifted speaker and teacher, and very popular with the residents. His successes at the national and international level are too numerous to recount. However, I must mention that he brought immense recognition to QU and Canada when he was elected to serve as President of the International Society of Neuropathology in 2000 after holding several offices with this organization for about a decade.

I was appointed in July 1978 as the third Neuropathologist at QU. I did my medical training (M.B.B.S) and a postgraduate degree in Pathology (MD) at Lucknow University in 1968 and 1972 respectively. I left India to pursue my research interests and I got an opportunity to do this at QU completing an MSc in 1976 and a PhD in 1978 under the supervision of Drs Robertson and Dinsdale. I also completed an FRCPC in Anatomical Pathology and became a diplomate of the American Board of Pathology in Anatomical Pathology and Neuropathology. I was fortunate to receive a scholarship from the Heart and Stroke Foundation of Ontario which provided salary support and allowed me to remain in the Department. I remember how supportive other Staff members such as Drs Kipkie and Steele were when I started as an Assistant Professor, but particularly Dr Kaufman. He reviewed my first Grant-in-aid thoroughly, giving me helpful pointers. I still remember the hour I spent in his office while he edited the summary page of the grant-in-aid until it was crystal clear. As an aside, that research Grant, my very first, was funded.

In 1979, David became Head of the Department of Pathology at QU. By this time he had already gained national and international stature, serving as President of the Canadian Association of Pathologists, Canadian Association of Neuropathologists and the International Academy of Pathology (US/Canadian Division) to name a few organizations. Despite his love for diagnostic and experimental neuropathology and teaching, he was gradually becoming more involved with administration. David was appointed Medical Vice-President at KGH in 1986. He reluctantly gave up the supervision of the Electron Microscopy Laboratory to me and the supervision of the Neuropathology Service Laboratory to Sam, who was also appointed as the Director of the Neuropathology training program in 1987. From 1992 to 1994 David served as Medical Director at KGH while continuing part-time diagnostic Neuropathology until 1993, when he officially retired from the Department. From 1995 he continued to serve KGH in the capacity of Special Advisor to the President. He and his wife Alice received a special award from KGH in 1999, in recognition of their contributions to the mission of KGH.

In July1992, Sam left to head the Pathology Department at the University of Western Ontario and 7 months later I left to head the Division of Neuropathology at the University of

Toronto and Toronto Western Hospital. My friends thought I was crazy to leave Kingston for Toronto, while others such as Drs Steele, Kaufman and Robertson thought it was a good career move. Dr. Ludwin returned to QU in August 1993 and a bright and enthusiastic resident – Dr John Rossiter, finished his Neuropathology training in the Department in 1994 being appointed as Staff Neuropathologist and Assistant Professor. John, a native of Clonmel, County Tipperary, Ireland, did his medical training at the University College of Cork and a PhD before arriving at QU in 1989. John is now the Director of Neuropathology, while Sam is Vice President, Research Development at KGH and Associate Dean Research in the Health Sciences Faculty at QU.

In order to keep this account brief, the numerous accomplishments of the Neuropathology Staff are not listed. Suffice it to say that they achieved a prominent stature and were selected to serve as President of various National and International Scientific Organizations and their committees.

Research

David pursued many areas of investigation during his career. He was interested in the pathogenesis of vascular changes in Wernicke's Encephalopathy. Drs Santosh Wasan and Herbert J. Manz did graduate work in this area, each receiving a MSc degree in 1967 and 1970 respectively. Dr Anders Sima, a native of Sweden and a protégé of Dr Patrick Sourander, worked with David in the area of Diabetic Peripheral Neuropathy. David teamed up with Henry to work on the cerebral effects of hypertension and their publications in this area started accruing from 1970. Many worked with them to obtain an MSc or a PhD degree such as Dr Hayashi, Dr Richard Haas and myself. I enjoyed the research work tremendously and what I remember is the support I received and the opportunity to pursue my ideas and interests.

Sam's research interest was the pathogenesis of demyelination, remyelination and oligodendrocyte biology. This was innovative research as until that time the perception was that remyelination in the adult central nervous system was limited. He received his second Weil award for his work in this field from the American Association of Neuropathologists in 1979 and subsequent to this numerous honourable mentions from the same Association. Dr David Munoz did an MSc degree under Sam's supervision and others (Drs Edward Johnson, David Ramsay and Debra Bakker) did research projects with Sam. Dr. John Rossiter's research interests include neuronal cell death mechanisms, neurotrauma and collaborative studies with Dr. Alan Jackson, Division of Neurology, on the pathogenesis of rabies virus encephalitis.

My PhD work, done with David and Henry, received the Weil award for the best paper in investigative neuropathology at the American Association of Neuropathologists meeting in San Francisco in 1976. This helped to launch my career in research. I received the Wild-Leitz award from the Canadian Association of Neuropathologists in 1979 and recognition also from other Associations for my research. I continued the line of investigation started during my PhD on cerebrovascular reactivity in hypertension and moved subsequently into the general area of the pathophysiology of blood-brain barrier breakdown in disease states. Later my work concerned the repair mechanisms in the brain in which angiogenesis and blood-brain barrier breakdown were key components. It seems that I spent a lifetime trying to define the properties that distinguish cerebral vessels from non-neural vessels, emphasizing originality and quality in my work rather than quantity. Eminent neuropathologists such as Dr Robert Terry, Dr Igor Klatzo and Dr Asao Hirano would stop me at international meetings to congratulate me on the quality of my electron micrographs. A summary of my research activities is available in the 2003-published

book that I edited on "The Blood-Brain Barrier". The molecular era has yielded several proteins unique to cerebral vessels which have the potential to provide clues about the pathogenesis of blood-brain barrier breakdown. These are subjects of my ongoing studies.

This section would be incomplete without mention of Dr Robert Kisilevsky. Although, not a neuropathologist, his quest into the mysteries of amyloid led him to studies of Alzheimer's disease and he continues his highly successful research as Professor Emeritus in the Department.

Postgraduate Training

David set up the RCPSC Neuropathology training program at QU. There was close co-ordination between the Neuropathology and Neurology programs and as residents we greatly benefited from this arrangement. There was a steady trickle of residents training in neuropathology at QU. Some of these residents are practicing at University Centres across Canada, e.g. Dr Wayne Moore is at the University of British Columbia in Vancouver, Dr Edward S. Johnson is at the University of Alberta in Edmonton, Dr David Ramsay is at the London Health Sciences Centre, Dr David Munoz and I are at the University of Toronto while Dr John Rossiter remains at Queen's University. Others further afield include Dr Anders Sima who is at Wayne State University in Detroit, Dr Jose Bonnin who works at the Methodist Hospital in Indianpolis, and Dr Ljubisa J. Dragovic is the Chief Medical Examiner in Pontiac, Michigan. (Success did not change him and the last time I met Ljuba, he was still the smiling very personable person that he was when he was a resident). Dr. David Kydd, on completing his Neuropathology training in the Queen's Program, undertook Neuroradiology training in Boston before returning to practice in his native Halifax, Nova Scotia.

Initially, all Pathology residents did a 3 month rotation in Neuropathology but subsequently only Anatomical Pathology residents followed this pattern. Neurology residents did a 4-6 month rotation in Neuropathology. In the '70s and '80s Ophthalmology residents also rotated in Neuropathology. As some of you may remember, the Neuropathology residents' room was located on the 5th Floor of Richardson Laboratory, almost across the hall from the Department Head's office. It was a small room divided into 5 work areas by glass partitions. I arrived at QU on a snowy, blustery day in January 1974, having driven across the border through a snowstorm and seeing snow for the first time in my life. I was fortunate that Alan Fletcher was rotating in Neuropathology at the time and I could not have picked a nicer person to work with and show me the ropes. In those days, I did not need a clock, as precisely at 12 noon Alan would be munching on his sandwich and at 10 am and 3 pm the aroma of the coffee that John Donoghue prepared in the Departmental Library came wafting down the hall. In the fall of 1976, two Ophthalmology residents Alan Cruess and Greg Hay, two Neurology residents – Don Brunet and Donald Chew and myself were occupying the residents' room. We had to focus and tune out the talk, otherwise nothing would get done. However, we learned a lot from each other and I still remember the comradery during that period. In retrospect, I wonder how I wrote 2 theses in this meager space. Computers came later and I still tell my students of those days when theses were typed using a typewriter and literature searches were done using the Index Medicus volumes. I remember with gratitude the efforts of Mrs Patricia Scilley, who was the secretary assigned to the Neuropathologists and who typed my two theses in her spare time.

My recollection is that David spent a few hours every morning reading and he was also privy to the latest research, being co-editor of Laboratory Investigation and a reviewer for various journals. As residents, we had a tough time keeping up with David. He always

encouraged us, but at the same time kept raising the bar higher, I suppose to help us to achieve our full potential.

Diagnostic Neuropathology

The volume of neurosurgicals at KGH was not large, however, the autopsies provided a wealth of neuropathology material which was second to no other centre in Canada. The support personnel for Autopsies – Andy Rice, Brad Tooley and later Paul Baskin and Jack Thompson were always very helpful to both Staff and residents, but the level of service became even better when Lloyd Kennedy was hired as a Pathology Assistant in 1978. As residents, we did a detailed work-up of each case and the material was used for presentation at Neuropathology Rounds on Thursday morning as well as other Departmental Rounds such as the Completed Case Conference and the Quiz Slide sessions held on Thursday afternoons. We were also given the opportunity to present at national and international meetings.

The Neuropathology Service Laboratory was initially located on the 5th Floor of Richardson Laboratory almost across the hall from the Residents' Room. The two technologists, Barbara LeClaire and Pauline Grennan, did excellent work under the supervision of Norman Meyers who had the ability to set up any technique that was requested. Later the Neuropathology Laboratory moved to the 4th Floor of Richardson Laboratory and then to Douglas 4, until it was amalgamated with the general Histology laboratory. Barb had a real flair for writing poetry and I still have the delightful poem which she wrote about me when I left the Department. Pauline is now at Baylor Medical School in Texas working with Dr Dawna Armstrong.

Concluding Remarks

From my perspective, the "Camelot" of Neuropathology at QU was the 1970s and 1980s. There was support from the Department Heads Drs Nathan Kaufman and David Robertson who created the academic environment which allowed trainees to achieve their goals; there were bright and enthusiastic residents in the Program; there was adequate and well qualified Neuropathology teaching staff and it was an exciting time in Neuropathology research. Histochemical, ultrastructural, ultracytochemical, and immunohistochemical studies were revealing novel findings which provided new dimensions to our understanding of the pathogenesis of many neurological diseases. This era laid a solid foundation for future contributions to Neuropathology at Queen's University.

Dr Sukriti Nag
Alumnus, Queen's University
Professor and Head, Neuropathology, University of Toronto
President, Canadian Association of Neuropathologists
Appalachian Trail 2000 miler

(Excerpts from my diary of the period I spent in the Pathology Department at Queen's University from January1974 - January 1993. My apologies to those whose names are inadvertently left out of this account.)

b) Experiences With Severe Acute Respiratory Syndrome (SARS)

Dr. Dick Zoutman

It is now almost 2 years since the first case of Severe Acute Respiratory Syndrome(SARS) was identified in Toronto. The events following that seminal diagnosis impacted on everyone's life not only in Ontario, but in the whole country, and has changed rules and conduct in hospitals and in healthcare for the foreseeable future. It is worthwhile to look back and to ask ourselves with the benefit of hindsight and epidemiologic analysis if we adjusted the approach to the problem in the best possible way.

What we now know for certain is:

1. SARS is spread largely by respiratory droplets. There were some "celebrated" instances believed to be airborne or spread through environmental contact but these pathways have not been the norm.
2. We know that transmission is very common in the healthcare setting both in the pre-hospital environment, in ambulances as well as throughout hospitals and particularly the Intensive Care Units (ICUs). Household spread does occur when one affected person becomes symptomatic in the intimate environment of a family setting.
3. Fascinatingly, children were infrequently infected, very rarely had clinical symptoms and are not transmitters of this infection. This raises some fascinating biological questions to which no answers are available yet.
4. Transmission did not occur until about the second week of the illness. By then the patients tended to have persistent cough and high fevers, and most of them were admitted to the hospital by this point during the outbreak.
5. The short incubation time of 4-5 days allows to conduct contact tracing and was one of the key factors that helped to control the outbreak.

On average one person will infect between 2-4 patients. However the so-called "super-spreaders" may transmit during the second week of their illness to many people in the hospital setting.

Limitations on contacts and quarantine were largely the principle methods used to control the spread of SARS in Toronto and around the world. The literature is now demonstrating that this was indeed a very effective means, but very difficult to achieve with the available resources. Patients were quarantined in their home or, on occasion in designated facilities, and some healthcare workers self-quarantined themselves at the hospital where they worked. In many countries quarantine became legally mandated where the need to quarantine overrode the rights of the individual. Various methods were used (video, police and community surveillance) to assure adherence to quarantine orders. In Toronto, the quarantine procedures were followed by Public Health and one had to rely heavily on the common sense and good will of citizens. This approach appeared to work in all but a few instances.

The various screening procedures that were introduced at the front door of hospitals and in some public settings have not been demonstrated overall to have been effective as the yield was extremely low. Nevertheless, it is quite likely that in the face of a possibility of another outbreak similar self-screening or mandatory screening procedures would become functioned in the healthcare sector. One realizes that even one instance of SARS slipping through the net and entering a hospital may provide a setup for an outbreak in the given institution with its profound implications.

The difficult area of travel advisories, alerts and entry screening to countries was retrospectively studied only to a limited extent. Travel advisories or health alerts to entering travellers have not been properly assessed at this point in time and may never be adequately evaluated. It appears that were they to have an impact, this would be low.

A recent global survey indicated that 72 patients with probable or confirmed SARS included 30 who had onset of symptoms before the day of entry to a country and 42 had symptoms that developed after their arrival. Various health declarations among travellers entering Canada, China, Hong Kong, Taiwan and Singapore during the outbreak reveal that out of 45.4 million travellers who completed such declarations about 13,000 reported symptoms suggesting they might have SARS but only 4 were subsequently proven to have the disease. This illustrates the very poor yield of this form of information. Furthermore, of almost 14 million people who had temperature screening done on leaving Beijing by air, train or other means approximately 5,000 had fever of which only 12 had probable SARS. In Taiwan they went so far as to quarantine 80,000 travellers from affected areas with only 21 having probable or suspected SARS, i.e., a yield of .03 percent. None of these were picked up using thermal scanning. The WHO recommended that international travellers be screened as they left countries; there were 2.4 million travellers who completed appropriate declarations and another 7.9 million were themselves thermally scanned for elevated temperature. These procedures netted 2 cases of SARS detected by health declaration and none through thermal scanning. Likewise, on inbound passengers, 35.7 million travellers from Canada, China, Hong Kong, Taiwan and Singapore revealed slightly less than 11,000 people with a fever by scan, and 4,100 had fever confirmed by subsequent oral means. None of these people however were found to have SARS.

What can we conclude from these broad measures in prevention of the spread of SARS in a community?

SARS was contained largely by very traditional public health strategies of detecting cases, following up and quarantine their close contacts, enhancing infection prevention activities in the home and very intense infection control activities in the hospitals. The wearing of masks in the social environment in the community has not been demonstrated as being very helpful and screening travellers appears to be too expensive for the minimal yield.

This raises the question about how might we manage an outbreak of an avian flu strain. Unfortunately, the avian strains do infect man from time to time but do not spread very effectively from one human being to another. Such spread was reported on occasion but is very limited. It is suggested that at least at present the risk of a worldwide outbreak of avian flu does not exist. However given the capacity for the RNA genome of influenza to mutate or recombine must be wary about this possibility. Fortunately, we do have antiviral agents (neurominidase inhibitors) which appear to be active against some of the avian influenza strains. Moreover, with the newer technologies of reverse genetics we are in a position to custom engineer various influenza viral strains and to custom build protective vaccines. Nevertheless, basic hygienic and animal care practices, as well as infection control practices, will always remain our first line of prevention and still worth a ton of cure.

Post Script:

Dr. Zoutman, a graduate of the University of Manitoba, has been practicing medicine for over 20 years and specializes in Internal Medicine, Infectious Diseases and Medical Microbiology at Queen's University at Kingston. A primary focus of his investigative work has been understanding the prevention and control of healthcare associated infections and related medical errors. He chairs the Ontario SARS Scientific Advisory Committee responsible for advising the Ontario Government on management strategies of the SARS outbreak, and is also a member of the Ontario Expert Panel on SARS and Infectious Diseases Control advising the Ontario Government of future strategies for the prevention of infectious disease threats. His work and collaborations have spanned the globe; he is a frequent invited speaker in Canada and internationally, and his work has been profiled extensively in the press.

6. ALUMNI NEWS:

a) Visiting Alumni

- Dr. John Veinot, Associate Professor of Pathology and Laboratory Medicine, University of Ottawa, Civic Site, visited the Department and delivered a lecture "The Pathology of Infective Endocarditis" on April 7, 2005.
- Dr. M. Daria Haust visited the Department and delivered a seminar ("The Role of Placental Pathology in Fetal and Neonatal Diseases") to residents in Pathology on November 24th, 2004.
- Dr. M. Daria Haust spent her annual "working visit" in the Department from April 24th to June 4, 2005 to continue and complete with Dr. H. Steele the departmental history (up to date) and assemble the 2005 AN of QPA.

b) Birth and Other Family Affairs

Twin baby girls, Angelina and Gabriela were born on July 17th, 2004 to Mr. and Mrs. Luis F. Villanueva. Mrs. Villanueva is the Alumna Dr. Monique Arquint. She was a resident in the Department, obtained a PhD in Microbiology and Immunology at Queen's, and following a one year Fellowship in Cytopathology at Baylor College of Medicine in Houston was appointed Staff Pathologist in our Department. In October 2001 she left for St. Mary's Hospital in Kitchener, but following her marriage to her husband (an engineer) Mr. Luis F. Villanueva, she moved with him back to Kingston. At present she has been a "stay-at-home-mom" attending to the lovely little daughters (Fig. 4).

c) In Memoriam

Madan Lal T. Wasan, husband of Dr. Santosh Wasan, died on April 28, 2005 after a prolonged illness. He was an Emeritus Professor of Mathematics and Statistics at Queen's University.

7. DEPARTMENTAL NEWS:

a) Special Events

- In the period since the issue of the last year's (2004) AN to April 19, 2005, twelve speakers from major universities of Canada or abroad delivered seminars at the Departmental Research Seminar.

- In addition, the Department hosted two Visiting Lecturers for Special Events:
  - Prof. Dr. Dietrich Keppler was the Fourth Nathan Kaufman Visiting Lecturer who delivered his address "Transport into and out of the Liver: Molecular Basis and Pathobiology" on November 4, 2004.

    Prof. Keppler is a Senior Investigator at the German Cancer Centre, Heidelberg, Germany and Professor, Department of Biochemistry, University of Heidelberg, Heidelberg, Germany. Following his lecture the Department hosted a reception in his honour at the University Club.

  - Dr. Timothy Triche was the Third M. Daria Haust Visiting Lecturer. He delivered the lecture: "Understanding Childhood Cancer: Morphology, Molecular Genetics and Models" on April 26, 2005.

    Dr. Triche is Professor of Pathology and Pediatrics at the University of Southern California and Head, Department of Pathology, Children's Hospital of Los Angeles, Los Angeles, California, USA. Following his lecture, the Department hosted a reception in his honour at the University Club.

b) Awards and Distinctions

- Dr. Xiaolong Yang received the post-doctoral Fellowship Research Award from Canadian Institutes of Health Research (CIHR). He was appointed to a research scientist position associated with David Lillicrap's Tier I CRC, effective September 1, 2004. Dr. Yang did his PhD at Memorial University. He spent his last five years at the Howard Hughes Medical Institute in the Department of Genetics at Yale University. He is currently working on tumour suppressor of protein.
- Dr. Philip Isotalo won the resident co-investigator award (resident award) of the Society of Cardiovascular Pathology Young Investigator Award at the USCAP annual meeting in Vancouver, March 2004.
- Dr. M. Daria Haust received the USCAP Distinguished Pathologist Award at the March 2004 USCAP meeting held in Vancouver. This award recognizes "distinguished service in the development of the discipline of pathology and is presented to an individual who is recognized as making major contributions to pathology over the years".
- Dr. Lewis Tomalty received the Aesculapian Lectureship Award for teaching excellence in Phase IIA.

- Dr. Christine Collier received the 2004 CSCC Award for Education Excellence
- Dr. Susan Cole (Cancer Biology) and Dr. David Lillicrap (Molecular Hemostasis) were awarded Tier I Canada Research Chairs, 2001-2008.
- Sandra Powell (Research Assistant to David Lillicrap) and Joan Tremblay (Facility Manager, Animal Care Service, Queen's) are the 2004 Premier's Award co-winners of Kingston's prestigious First Capital Challenge, a competition for entrepreneurs with new and innovative ideas. Their business case for an animal blood bank, only the second of its kind in Canada, won the $50,000 prize, resulting in the creation of Kingston's Lifestream Animal Blood Bank Inc.
- Dr. Susan Cole was elected by Senate to serve on the International Centre Council of Queen's from September 1, 2004, to August 31, 2006.
- Adina Vultur, a Doctoral student supervised by Dr. Leda Raptis, was awarded a Governor General's Academic Gold Medal award. Only two medals are given out each year by Queen's University to graduate students who achieve the highest academic standing in their degree program. Adina is the first Pathology student to win this honour.

  Adina completed her PhD degree requirements on April 11, 2005. The title of her thesis was 'The membrane signaling apparatus is required for the transformation by nuclear oncogenes'. She joined the Master's program in the Department in September 1998, successfully defended her Mini-Master's thesis in August 2000 and was promoted to the PhD Program (September 2000).

c) Appointments, Promotions, Retirements, Resignations

- Ms Norma Layno is currently the Administrative Director of DPMM, KGH and Queen's University; she started in January 2005, replacing John Stoneman.

  Norma holds an MSc in Biological Sciences and an MSc in Public Health; and Advanced Certification in Medical Laboratory Technology (ART), Specialist in Chemistry (American Society of Clinical Pathologists) and numerous health care and executive management certificates. She has held technical, as well as managerial positions in both the private and public sector over the past 25 years. Norma was most recently employed by The Scarborough Hospital where she was instrumental in the establishment of a Shared Hospital Laboratory corporation, was the hospital representative for laboratory regionalization, led the development of the lab accreditation plan, and helped implement an integrated Laboratory Information System (LIS), as well as a Picture Archiving and Communication System (PACS). She looks forward to an exciting and fruitful career in our Department.

- Dr. Robert Liao joined the Division of Microbiology in the DPMM effective July 26, 2004. After completing his PhD in Medical Microbiology and Immunology at the University of Alberta, Dr. Liao undertook a Fellowship in Clinical Microbiology at the University of Washington in St. Louis. He is a member of the team which provides diagnostic microbiology laboratory services to both our Academic Health Science Centre and the broader region of Southeastern Ontario. Dr. Liao brings to our Centre specific expertise in diagnostic molecular microbiology and will help lead the implementation of molecular technology in the Microbiology Laboratory. Dr. Liao holds a cross appointment in the Department of Microbiology and Immunology at Queen's.
- Dr. Lorne Seargeant became the Service Chief of the Division of Clinical Chemistry in the Department, effective September 13th, 2004; he succeeded Dr. Michael Raymond (who retired in the spring 2004), and provides leadership for the provision of diagnostic clinical chemistry services to both our Academic Health Science Centre and the broader region of Southeastern Ontario. Dr. Seargeant came from the Health Sciences Centre in Winnipeg where he has had a distinguished career in clinical chemistry, and as Director of the Metabolic Diseases Laboratory. He is an expert in biochemical genetics and has research interests that include the diagnosis of neural tube defects, screening for mitochondrial oxidative phosphorylation disorders and the detection of respiratory chain defects.
- Dr. Christopher Nicol was appointed to a research scientist position associated with Susan Cole's Tier I CRC, effective February 7, 2005. He holds a primary appointment in the DPMM, a cross-appointment in Pharmacology and Toxicology and is a member of the Cancer Research Institute. He joined us from the US NCI, where he made extensive use of knock-out mouse models to study the role of the peroxisome proliferators activated receptors (PPARs) in the etiology of breast and colon cancer, as well as other diseases, such as type II diabetes.
- Dr. Harriet Feilotter assumed a full-time South Eastern Ontario Academic Medical Organization (SEAMO) position in the Division of Genetics of the Department, effective September 1, 2004, as an Assistant Professor. Since January of 2002, Dr. Feilotter held part-time appointments as an Associate Director of the DNA Diagnostics Laboratory at KGH and a Term Adjunct Assistant Professor appointment at Queen's. In her full-time appointment, she maintains her responsibilities as an Associate Director of the DNA Diagnostics Laboratory, with particular interest in molecular oncology, and she continues as Director of the Gene Microarray Facility at Queen's, a position that she has held since September 2000. Dr. Feilotter's research is focused on translational projects in oncology with particular emphasis on gene microarray studies.
- Dr. Dick Zoutman was promoted to full Professor, effective July 1, 2004.
- Dr. Peter Greer was promoted to full Professor, effective July 1, 2005.
- Dr. David Hurlbut received tenure status, effective July 1, 2005, as an Assistant Professor.

- Anne Hanley retired from her position as Manager Genetics Services, September 1, 2004, to pursue other opportunities.
- John Stoneman, the Managing Director of our Department, decided to pursue a professional opportunity outside KGH and Queen's, and resigned from his position effective September 3, 2004. He is currently employed by Healthtech Inc., Toronto, ON.

8. ANNUAL REPORT 2004-2005 – Dr. Iain Young (Chair)

The 2004-2005 year was an extraordinarily successful one for our Department. In the latter part of the preceding year, we developed an integrated and comprehensive strategic plan for both the Hospital and University sides of the Department of Pathology and Molecular Medicine as well as the Division of Clinical Laboratory Services of Kingston General Hospital. Entitled "Excellence in Service and Discovery: A Strategic Management System", this plan established a new strategic framework based on the following statements of mission and vision:

Mission:
Together, we proudly serve our regional community through the provision of expert laboratory and clinical services, education and research.

Vision:
We strive to be national leaders in advanced diagnostic services, employee success, student achievement and knowledge discovery.

The new strategic framework includes the following four overarching strategic priorities:

Strategic priority #1 – People
Goal: to recruit and retain a diverse group of highly skilled staff, faculty and students and provide an environment which will enable them to achieve their highest potentials.

Strategic priority #2 – Quality
Goal: to provide clinical and diagnostic services and programs in education and research which are recognized nationally for their excellence.

Strategic priority #3 – Integration and Partnerships
Goal: to lead in the development and optimization of regional laboratory services in Southeastern Ontario.

Strategic priority #4 – Business Process Management
Goal: to apply sound business practices to responsible stewardship of our resources, enhance accountability for high standards of care and to manage utilization of resources in a fashion which allows us to achieve our objectives.

Guided by these priorities we established strategic objectives for each of our principal goals: laboratory and clinical services; education; research and administration/management. I will highlight some of the Department's initiatives and key achievements in each of these areas.

Laboratory and Clinical Services

The Department recruited three excellent individuals to faculty positions in the clinical laboratories. Dr. Lorne Seargeant was appointed Service Chief of Clinical Chemistry, a position made vacant by the retirement of Mike Raymond. Lorne was recruited from the University of Manitoba where he had achieved national recognition for his expertise in biochemical genetics. Dr. Robert Liao was recruited to the clinical microbiologist position vacated by Tim

Karnauchow. Robert came to the department from the Clinical Microbiology Training Program at Washington University in St. Louis and brings to us specific expertise in diagnostic molecular microbiology. The department also established a new position in diagnostic molecular genetics which has been filled by Dr. Harriet Feilotter. Harriet had had an adjunct appointment in the department since 2002 and we are delighted to be able now to include her among our full-time faculty. Apart from her diagnostic role in molecular genetics, Harriet is also the Director of the Gene Microarray Service and has an active translational cancer research program.

The Department was also highly successful in the renewal of its laboratory management team. Joyce deVette-McPhail became Manager of Core Laboratory Services, replacing the retired Mary Waugh, and Susan Pugh was appointed Manager of Microbiology and Genetics following the retirements of Linda Fidler and Anne Hanley. As well, Norma Layno was recruited to the Administrative Director position which had been made vacant by John Stoneman's departure to pursue a consulting career.

The severe budget constraints faced by the hospitals during the last several years have made it extremely difficult for the Division of Clinical Laboratory Services (CLS) to introduce new technology and keep abreast of advances in tertiary level laboratory medicine. Consequently, the Department has undertaken a strategic initiative to develop new programs to bridge "quality gaps" in several diagnostic areas, particularly those dependent on rapidly advancing molecular technology. A key achievement has been the implementation of a molecular diagnostic unit in the clinical microbiology laboratory. Under the leadership of Robert Liao, this technology has been established and its introduction into routine diagnostic microbiology has begun.

The department received approximately $900,000 from the Diagnostic Medical Equipment Fund provided by the Ministry of Health-Long Term Care. This funding allowed us to update several critically important technologies in the laboratories, the modernization of which had been delayed by the chronic insufficiency of the hospital capital equipment budget.

The CLS Program underwent the very rigorous Ontario Laboratory Accreditation process. Under the medical leadership of Dr. Sandip SenGupta, our administrative team accomplished the successful implementation of OLA standards across the laboratories and achieved full accreditation for the maximum five-year term.

In our Laboratory Outreach Program, we extended our laboratory directorship services to the Weeneebayko Regional Hospital in Moosonee. Since his retirement, Mike Raymond has continued to participate in the Outreach program as the Director of the Weeneebayko lab. Dick Zoutman, the Service Chief of Clinical Microbiology and the Director of the Infection Control Program, has extended widely our infection control service. Within our laboratory outreach program, Dick has been appointed Medical Director of the Infection Control Program at the Providence Continuing Care Centre. As well, Dick spearheaded a proposal to the Ministry of Health-Long Term Care to establish an Infection Control network within our region. This program, entitled HEROIC (HealthCare Providers of South Eastern Region of Ontario Infection Control Program) has been funded and its implementation will facilitate a coordinated approach to regional infection control in southeastern Ontario.

Education

Under the leadership of Dr. Caroline Rowlands, the Department has made great strides towards achieving the critically important objective of fully reconstituting our residency training programs. As of July 1st of this year, we will have 14 residents who will be distributed among our various programs as follows: Anatomic Pathology – 10 residents; General Pathology – 1 resident; and, Hematopathology – 3 residents. A space plan to accommodate the expansion of our residency program is currently being implemented and will result in the creation of high quality workspace for all residents. We have acquired a new 12-head teaching microscope and have invested in the replacement of obsolete residents' microscopes.

Our graduate program is flourishing. We have strategic objectives of expanding enrolment in the program and increasing the ratio of PhD to MSc students. In the upcoming academic year, we anticipate having approximately 35 students in the program, at least 40% of whom will be pursuing a PhD. In recognition of the terrific contributions that Bob Kisilevsky has made to the Department over his illustrious career at Queen's, the Department has established a named endowed fund in his honor. The Robert Kisilevsky Research Fund is now supporting a bursary program for first-year PhD students in Pathology and Molecular Medicine. A major achievement was the receipt of full accreditation status for our graduate program from the Ontario Council of Graduate Studies. The Department is very proud of Ms. Adina Vultur, a graduating doctoral student supervised by Leda Raptis, who won one of two Queen's University Governor General's Academic Gold Medal awarded for 2005.

The Department has expanded the enrichment educational program it provides for Ontario High School and Elementary school students. Three courses are now offered. The ABC Program is directed to grade 5/6 students. It uses plastinated human tissues and microscopic slides to illustrate how applying the science of Pathology, one can gather and process evidence for human disease and forensic purposes. The SEEDS Program uses a case study format to introduce grade 7/8 students to various aspects of anatomy, genetics, infectious disease and forensic pathology. A Hands-on-Pathology course is tailored for grade 11/12 students. This latter program provides an opportunity for students to develop their skills of observation, interpretation and integration in the context of a detailed analysis of the cause of death in a forensic case.

Two faculty members were recognized for their accomplishments as educators. Dr. Christine Collier received the 2004 Award for Education Excellence from the Canadian Society of Clinical Chemists and Dr. Lewis Tomalty received the Aesculapian Lectureship Award for his teaching in Phase IIA of the undergraduate medical curriculum.

Research

The Department's research enterprise continues to excel. Total research funding was $6.5 M last year and faculty generated approximately 100 publications, more than 80 of which were in peer-reviewed journals. Departmental faculty holding major external awards include Susan Cole (Tier I Canada Research Chair) and David Lillicrap (Tier I Canada Research Chair and Heart and Stroke Foundation Career Investigator Award).

The Department recruited two superb junior faculty members to research scientist positions. Xiaolong Yang was recruited from a postdoctoral position at Yale and Chris Nicol came to us from a postdoctoral position at the NIH. Both Xiaolong and Chris are establishing programs in basic cancer research.

The current principal strategic research objective of the Department is to develop its capability and productivity in translational research. We have established an Experimental Pathology Unit, the purpose of which is to facilitate translational research, and Dr. David LeBrun has been appointed its first director. This unit is centered on a Tissue Microarray Facility which has been created through a partnership with the National Cancer Institute of Canada – Clinical Trials Group (NCIC-CTG) Tumour Bank. When fully functional, this Unit will generate tissue microarrays of tumours from patients involved in clinical trials, thus creating an extremely valuable resource for translational research. This technology will also be applied more broadly to a variety of departmental research projects.

Through a collaboration with a number of research groups at Queen's, the department has established a laser capture microdissection unit. This technology provides the capability to conduct molecular analyses on single cells or small groups of cells which have been specifically dissected from a tissue section. The Queen's Gene Microarray Service has been consolidated within our Department. Under the directorship of Harriet Feilotter, this cutting-edge technique supports the research of numerous internal and external investigators.

The Department has become extensively involved in tumour banking through two separate initiatives. It administers a bank of formalin-fixed, paraffin-embedded tumour samples for the NCI-CTG and has recently become the fifth collection site in the Tumour Bank Program of the Ontario Cancer Research Network. This latter banking activity is focused on the prospective accrual of fresh-frozen tumour samples and detailed matched clinical data.

Sandra Powell (Research Assistant to David Lillicrap) and Joan Tremblay (Facility Manager, Animal Care Services, Queen's) were the 2004 co-winners of Kingston's prestigious First Capital Challenge, a competition for entrepreneurs with new and innovative ideas. Their business case for an animal blood bank, only the second of its kind in Canada, won them the $50,000 prize, resulting in the creation of Kingston's Lifesteam Animal Blood Bank Inc.

Administration and Management

The Department is standardizing the computer network for its clinical faculty. This initiative will significantly increase the hospital resources and infrastructure which support the departmental network and will also greatly enhance network security. Digital technology has replaced almost all conventional photography conducted by the Department. Photographic evidence from medical legal autopsy cases is now retained exclusively on CDs within individual case files, the results of direct immunofluorescence studies are retained in an electronic archive, photographs and diagrams of surgical pathology specimens are captured digitally and available for review on work stations at the time of case sign-out by a pathologist, and interpretation of scanned electron microscopic images is now conducted on high resolution monitors at pathologists' work stations.

Our major strategic administrative objective is the improvement of our current Information Technology infrastructure through replacement of the laboratory information system. Budget approval has been granted and the Laboratory Information System (LIS) acquisition process has been initiated in concert with KGH Administration. We anticipate completing installation of the new LIS in 2006.

This is a very exciting time of renewal and development for the Department. Despite the ever-present challenges associated with constraints on funding and space we continue to grow and establish new initiatives within our clinical, educational and research missions. Our achievements of the last year are a tribute to the outstanding quality of our people and I look forward to continuing to work together in the pursuit of our collective departmental vision with them.

Iain D. Young, MD

Figure 1: L-R Drs David M. Robertson, Sukriti Nag and Samuel K. Ludwin. Taken at the Departmental Party in June 1992 for Dr. Robertson on his retirement and for Dr. Ludwin prior to his leaving for the University of Western Ontario.

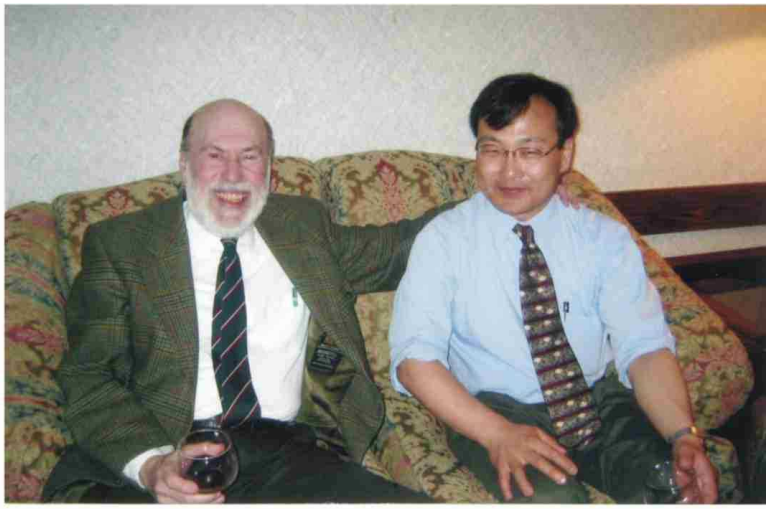

Figure 3: Dr. Robert Kisilevsky (left), the new Editor of the Alumni Newsletter of the QPA in conversation with staff pathologist Dr. Tadaaki Hiruki in the University Club, following Dr. Triche's lecture on April 26th, 2005.

Figure 2: Dr. Timothy Triche, the invited Third M. Daria Haust Visiting Lecturer (left) and Dr. G. F. Kipkie (right) at the University Club following the lecture on April 26th, 2005.

Figure 4: Dr. Monique Arquint (Mrs Luis F. Villanueva) our Alumna, who was a resident and staff member in the Department (until 2002) with her two daughters, Angelina and Gabriela Villanueva, both born on July 17th, 2004.

9. PHOTOGRAPHS

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