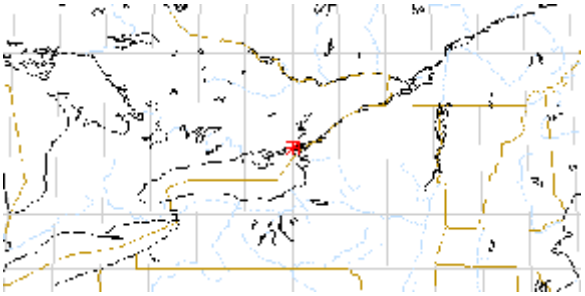
Pathology News

Vol. 8#12 December 2001



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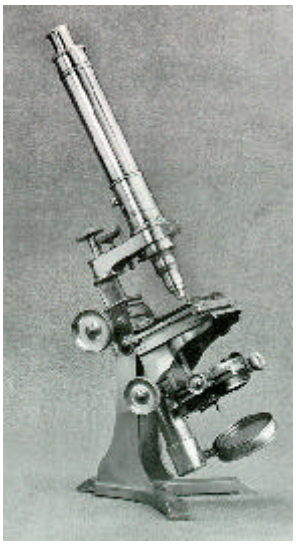

We publish only that which is submitted! (There are no expense accounts and no reporters) If there is no news about your area that means we haven't received any!

Dr Manley using the digital imaging camera on Photomic

From the Head

A "thank you" Dr. Manley received form Dr. D. Haust regarding the 1st Annual Haust Lectureship:

"Dear Doctor Manley:

I wish to thank you and the Department for the honour bestowed upon me by establishing the 'M. Daria Haust Lectureship' and for sponsoring the first Visiting Lecturer, Dr. Kurt Benirschke of the University of California at San Diego. His lecture: 'Challenges of the Pathology of Twinning', delivered on October 1st, 2001 in Etherington Hall, was attended by members of the departments of Pathology, Paediatrics, and Obstetrics and Gynaecology. By all accounts, it was an outstanding presentation which would be expected of a world-renowned authority in the field of perinatal diseases.

I also wish to thank you for hosting a reception for those in attendance, and for including my family in the events of that day.

The existence of the Lectureship in my name has a special meaning for me. It has been sponsored by the Department of Pathology at Queen's University where I spent happy years as a postgraduate, graduate and Faculty member, and for which I shall always retain a special place in my heart.

Again, I wish to express my warm appreciation to you for making this lecture a reality and to the Department for supporting your efforts.

Sincerely,

M. Daria Haust"

For Your Info

THE SECOND NATHANN KAUFMAN VISITING LECTURER

DR. JANET ROSSANT

Dr. Rossant is Joint Head, Program in Development and Fetal Health at the Samuel Lunenfeld Research Institute, Mount Sinai Hospital, Toronto; and Professor in the Department of Molecular and Medical Genetics and the Department of Obstetrics/Gynecology, University of Toronto

"Signalling Pathways in Early Mouse Development"

Thursday, January 10, 2002
1600 hours (4:00 p.m.)
Richardson Amphitheatre
Queen's University

Sponsored by
The Nathan Kaufman Lectureship and Visiting Speaker Trust Fund and The Department of Pathology, Queen's University

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FACULTY ANNUAL REPORTS

It is that time of year again!! Annual reports are due in the Faculty Office in the early months of 2002. The **updated** Annual Report form for QUFA Faculty can be found on the Faculty website at: http://meds.queensu.ca/instructions.html and are due in Dr. Manley's office by **February 1, 2002.** The deadlines for Clinical Faculty are as yet undecided. Notification from the Faculty Office should be received shortly.

Monday, December 3, 2001
Queens Gazette

Two notable Queen's researchers have been recognized for their leadership roles in research by being awarded Canada Research Chairs. **Dr. Susan Cole**, a prominent cancer researcher, and **Dr. David Lillicrap**, a well-known researcher of inherited blood disorders, will each receive $1.4 million in research funding over seven years.

For Dr. Cole, the new funding will further her research into the battle against cancer and chemical toxins. "It will assist in the recruitment of a junior faculty member with research expertise in animal models of drug and carcinogen metabolism," says Dr. Cole, who is also a senior scientist of Cancer Care Ontario. "These activities will complement my research as well as that of several members of the Cancer Research Institute and the Department of Pharmacology & Toxicology. It will also enhance my ability to contribute to the new drug development and translational research activities of the Queen's University Cancer Research Institute."

In addition the funding will assist in the recruitment of top-caliber graduate students and post-doctoral fellows. The equipment that comes with the award will provide a much needed modernization of Dr. Cole's tissue culture facility as well as instrumentation for enhanced throughput assays that will be used by Dr. Cole and at least 12 other faculty members in the departments of Pathology, Biochemistry and Pharmacology & Toxicology.

For Dr. Lillicrap, the award will advance his research into inherited blood disorders. "This award will enable our group to take advantage of the many opportunities that are now presenting themselves in the areas of genetic and molecular medicine," he says. "As our understanding of the genetic basis of many diseases continues to increase, we can look forward to an enhanced potential for the application of novel diagnostic and therapeutic strategies. The area in which we are working, that relating to the

genetics of blood clotting, continues to be at the forefront of these innovations."

Drs. Cole and Lillicrap join the following Queen's researchers who were named chairs in the previous two rounds: James Bergin (Economics), Ian Moore, (Civil Engineering), Doug Munoz, (Multidisciplinary Health Research), Almeria Natansohn (Polymer Chemistry), John Smol (Evolution and Ecology), Zonchao Jia (Biochemistry), Kevin Robbie (Physics) and Praveen Jain (Electrical and Computer Engineering).

The Canada Research Chairs program is a $900-million federal initiative established last year to help Canadian universities attract and retain the best researchers and achieve research excellence in health, natural sciences, technology, social sciences and the humanities. Two thousand research chairs will be established across Canada during the five-year program. Queen's is expected to receive 57 of them.

Grants'N'Such

The Grant supplement will no longer be included in paper form. It will only be available from the website listed below:
http://www.path.queensu.ca/pathnews/grants.pdf

Annual Clinical Trust Fund Competition

The deadline for submission of applications to the Department of Pathology Clinical Trust Fund competition will be **Monday, January 28th 2002.** A memorandum detailing the terms of reference for this competition will be circulated shortly, but they are unchanged from last year. Some of the critical elements of this program are as follows. The principal investigator or co-investigator must have a primary appointment in the Kingston Hospitals' Department of Pathology; funds may be made available for projects that can extend from utilization and outcome studies to clinically applied basic research; funds may be requested for supplies, research personnel and research related equipment; travel, graduate student stipends and faculty salaries will not be funded through this program; funds for individual grants will be limited to a maximum of $10,000.

Application forms for this competition can be obtained from **Barb Latimer** in the Departmental office or on the departmental network under g:\general\clinicaltrust\2002applicationform.

The application includes a two page research proposal, a financial statement and the principal investigator's current curriculum vitae.

Recent Publications

Remember that complete (or as complete as Kevin can make it) list of publications from 1995-2000 is available online at
http://www.path.queensu.ca/queens/pubs.htm.htm

E.M. Leslie, **R.G. Deeley** and **S.P.C. Cole**. Toxicological relevance of the multidrug resistance protein 1, MRP1 (ABCC1) and related transporters. Toxicology *167:* 3-23 (2001). *(invited peer-review*ed).

E.M. Leslie, K. Ito, P. Upadyaya, S.S. Hecht, **R.G. Deeley** and **S.P.C. Cole**. Transport of the ß-O-glucuronide conjugate of the tobacco-specific carcinogen 4-(methylnitrosamino)-1-(3-pyridyl)-1-butanol (NNAL) by the multidrug resistance protein 1 (MRP1/ABCC1): Requirement for glutathione or a non-sulfur-containing analog. J. Biol. Chem. *276:* 27846-27854 (2001).

E.U. Kurz, **S.P.C. Cole** and **R.G. Deeley.** Identification of DNA-protein interactions in the 5' flanking and 5' untranslated regions of the human multidrug resistance protein (MRP1) gene: Evaluation of a putative antioxidant response element/AP-1 binding site. Biochem. Biophys. Res. Commun. *285:* 981-990 (2001).

D. Zhang, **S.P.C. Cole** and **R.G. Deeley**. Identification of a non-conserved amino acid residue in Multidrug Resistance Protein (MRP) 1 important for determining

substrate specificity: evidence for functional interaction between transmembrane helices 14 and 17. J. Biol. Chem. *276:* 34966-34974 (2001).

K. Ito*, C.J. Oleschuk*, C. Westlake, M.Z. Vasa, **R.G. Deeley** and **S.P.C. Cole**. Mutation of Trp^{1254} in the multispecific organic anion transporter, multidrug resistance protein 2 (MRP2) (ABCC2), alters substrate specificity and results in loss of methotrexate transport activity. J. Biol. Chem. *276:* 38108-38114 (2001). (*these two authors contributed equally to this work).

Y.M. Qian, W. Qiu, M. Gao, C.J. Westlake, **S.P.C. Cole** and **R.G. Deeley**. Characterization of binding of leukotriene C_4 by human multidrug resistance protein 1: evidence of differential interactions with NH_2- and COOH-proximal halves of the protein. J. Biol. Chem. *276:* 38636-38644 (2001).

Richardson Research Seminars

Department of Pathology
Seminar Schedule 2001 - 2002
Tuesdays @ 4:00 p.m.
Richardson Amphitheater,
Richardson Laboratory

January 8	Dr. Andrew Craig
January 15	Dr. John Dick
January 22	Dr. Shelagh Mirski
January 29	Fiona Grant / Sarah Kinkley
February 5	Dr. Michel Tremblay
February 12	Angela Hui / Joanna Wojcik
February 19	Dr. Morag Park
February 26	Dr. Don Maurice (tentative)
March 5	Julie Yome / Julie Shaw
March 12	Dr. Trang Hoang
March 19	Patrick Smith / Donna Situ
March 26	Dr. Waheed Sangrar
April 2	Peter Truesdell
April 9	Jimson Wong / Catherine Lin
April 16	Kevin Weigl

Jobs Available

SUMMER POSITIONS
IN THE DEPARTMENT OF PATHOLOGY
FOR QUEEN'S MEDICAL STUDENTS

Are you a Queen's medical student who wants a clinical summer position that pays you to learn? If so, apply to the Department of Pathology for one of the two summer studentships offered. Successful applicants will be employed for 12 weeks in the Anatomical Pathology Service, to carry out routine duties as well as take part in educational functions and are allowed the opportunity to do a limited number of half-day observerships in other departments.

Interviews will be held in mid-February 2002.

Please send a letter of application with your curriculum vitae, on or before Monday, January 28, 2002, to: Barb Latimer, Richardson Laboratory, Room 202, Department of Pathology, Queen's University. Tel: 533-6000, extension 74887

Jobs Wanted

Seeking Employment

I have an application and CV from Li Sa seeking a postdoctoral research position. She will graduate at the end of January from the Department of Bio-medical Engineering of Shanghai Jiaotong University. Her dissertation is entitled: "paclitaxel and liposomal-paclitaxel in angiogenic and metastasis for breast cancer". She has knowledge of most immunology and molecular biology techniques and her dissertaton involved immunohistochemistry, polymerase chain reaction (PCR), tissue culture, SDS-PAGE electrophoresis and immunoblot. If you are interested in hiring her as a postdoc and would like a copy of her CV see Barb in Dr. Manley's office.

Dr. Dexter's Corner

THE COVERSLIP OR THROUGH THE GLASS DARKLY

It is QMP-LS's fault. It all started with a review of the Draft Guidelines for Laboratories and Accreditation. Moving beyond assured quality results and data, we segue into Good Practise Guidelines and Retention Rules. This essay is by no means one of complaint, but a gentle pointer to the implications of recommendations.

Working my way through parathyroid frozens "please weigh the specimen" times four, my attention wavered slightly between numbers 3 and 4 to other objects at hand. The little scale measures to fractions of milligrams, and nearby were lots of little things to weigh.

It began with coverslips. Realizing this may not be common knowledge, I felt strongly these gems should be shared:

***Coverslips*:**

Weight of 24 x 60 #1 coverslip - 570.7 mg
Weight of 24 x 50 #1 coverslip - 425.6 mg

Slides

Weight of 1" x 3" x 1 mm, non-frosted - 4613.4 mg
Weight of 1" x 3" x 1 mm, frosted - 4409.0 mg

Slides + tissue + mounting media + 24 x 60 #1 coverslip

Weight - 5034.7 mg

The implications are profound. Each of the large wooden slide trays we use holds up to 50 slides and, at a conservative 5 trays a day, a total of up to 250 slides may be examined. This represents some 1.2586 kg. of glass alone. Each slide requires lifting a minimum of 23 cm from the desk top to the microscope stage. Goodness knows how many Joules, Newtons, kiloponds, long ton-forces or foot poundals are consumed or how widespread a disturbance of entropy. Given a 10 percent dropsy co-efficient (DC) of the average pathologist, additional energy

expenditures of carrying 5.0347 gm an average distance of 1 metre (floor to stage) within a limited so-called Pick-Up Time (PUT) is not insubstantial.

Forget the cerebral challenge, this is a physical workout. Throw out those Jane Fonda tapes and bring on the Job Plod Pathologist Physical Exercise tapes. There had to be an error in the cartoonish exophthalmic megacephalic steatopygic pathologist stereotype. Lean and mean is the future, the more slides the merrier.

The slides have their moment of glory when the mysteries of disease are revealed and the diagnosis, with appropriate pomp and circumstance, is proclaimed. But like mayflies, their time in the spotlight is fleetingly short - a brief sojourn in the sun for the permount to dry, and they are relocated to their place in the files - a cold dusty dark sanctuary, unfrequented. Storage and, particularly, long-term multi-year retention is hard to attain. Parsimonious administrators challenge the need for attribution of resource to little used dead space. It is rarely good space. Almost by definition, it is in a basement or subcellar. Lighting is poor, paint peels, and shelving is a sampling of all types used and discarded by the hospital since the 1900's. It is often laid out in the nook and cranny principle. Maintaining such archives actually takes effort, for one cannot merely dump last years cases in some corner. Old cases have to be retrievable, and the effort to allow for this is often under recognized and difficult to liberate and apply.

From the draft guidelines, it is the suggested requirement of abnormal haematology smears to be held for a minimum of 10 years for adults or for patients under 18yrs, 10yrs post their 18th birthday. Most laboratories are not doing this, although all marrows and associated smears are retained.

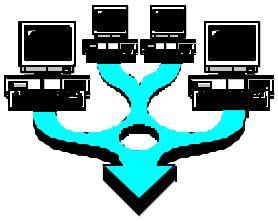
Retention of abnormal smears at a rate of, lets say 200 a day, is not unreasonable for a busy medium-sized hospital laboratory. Each day would generate 888.18 gm of glass (frosted, no coverslip) 6.217 kg/week or 323.28 kg/year. Each slide requires sequencing and filing. Glass slide filing systems are not cheap. Wooden boxes fall apart, break, and cascade glass splinters everywhere - quite apart from being too heavy to lift. Steroid-use screening for pathologists is not being advocated on the basis that single slide lifting should not exceed muscular strength capabilities. Repetitive motion studies and relation to carpal tunnel syndrome are currently underway.

The need for more archival space is therefore the message #1. The second point is that glass is bloody heavy and may take two or three strong men plus lifting devices to move a full glass slide filing cabinet. Thirdly, storage facilities need to be well lit, dry, and accessible. Lastly, resources to maintain the filing process of adding, discarding, retrieving, and refiling are often forgotten.

Avoid the errors of the architects of the then new library at the Regina campus of the University of Saskatchewan. A glorious building of modern architecture with a startling resemblance to a slot machine, it was built to accommodate additional floors in the future - until that is, someone factored in the weight of books!

David F. Dexter, M.D.

Network News



Large File Attachments and Email

A reminder that mail systems are not designed to handle *large* file attachments (inbound or outbound).

In general, the "polite" limit is 2-3 Mb, as most mailbox sizes of recipients is 5Mb maximum.
When you send an attachment, it typically grows by 50% when in mail server transport format. There are other problems besides recipients email box size restrictions, such as the mail systems along the way that handle the mail.

We have an anonymous http/FTP alternative. Drop any large files you want to send into

g:\general\ftp
Then send the recipient an email telling them to web browse over to
http://www.path.queensu.ca/
and click on the pickup link at the bottom of the left menu. The password is:
xxx

They can then download any file you placed in there. Have them email you back to tell you that they have successfully received the file and you can then delete it from g:\general\ftp

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Monthly Cleaning Tips

Monitors: turn off your monitor and take a good look at it... see a lot of smudges? Fingerprints? Peanut Butter? If so you are a prime candidate for a window washer. Find a clean cloth or paper towel, spray some windex on it and clean off the monitor. Make sure that it is powered off, otherwise you may find yourself on the receiving end of some minor electrostatic shocks from the screen.

ACDC Graphics Viewing/Editing Program

With the growing use of our digital imaging systems, we realized we needed a good user-friendly graphics editing program so faculty could edit images directly. We settled on ACDC v4 and purchased a number of licences last month. It is now installed on all of the imaging and presentations systems (including the laptops) and on faculty workstations (mainly those that deal in digital imagery). If you *don't* have ACDC and want it, let me know as I still have a few spare licences leftover.

ACDC allows you to crop, resize, colour, brightness balance and far more. We typically also use it to display images during presentations directly without importing them one by one into Corel Presentations or Microsoft Powerpoint.

Email Traffic: (number of pieces in and out)

November 1994: 838
November 1995: 3206
November 1996: 4015
November 1997: ?
November 1998: 8017
November 1999: 21408
November 2000: 24352
November 2001: 30453

The above lists the number of pieces of email in and out, and in general, they are getting bigger as more and more people send more and larger attachments.

Xmas increases Spam by 650%

From the ZDNet website:
09:21 Friday 7th December 2001

Inboxes are being flooded with junk emails at an increasing rate during the holiday season, leading to network overload and fast-spreading viruses

The festive spirit has seen Christmas email spam swell 650 percent since this time last year, heightening the risks associated with unprotected networks and placing a burden on workplace bandwidth.

During non-holiday periods 60 percent of junk emails are regurgitated around the Web and the 650 percent increase is indicative of new junk email submissions to SurfControl's RiskFilter database --- which categorises junk email and blocks it from entering a customer's network.

"What's happening now is people are getting fun Christmas games but amongst them all are things like the Goner virus," Heunemann said.

"The consequences can be quite disastrous, especially for organizations with a lot of email users with lots of addresses in their book...it can create quite an email storm," he added.

Also, recipients of email greetings, games, screensavers and movie files, often hoard them in their inbox, with one 5MB holiday screensaver taking the same amount of space on a company server as 160 plain text emails, according to Heunemann.

Pegasus Mail v4.01 Email Tips

Pegasus Mail v4.01 went live Monday morning, Dec 3rd, 2001.
Some of the new features were listed in last months newsletter, but in general it works seamlessly from the older edition.

LISImage

The digital image web site is up and running at http://lisimage/ The newest addition to the image database are EMSCANs (with 3 cases and 48 images to date).

Date	#cases	#photos	Total Gb
2001 Dec 03	1853	7511	7.0
2001 Nov 08	1743	6765	6.0
2001 Oct 04	1632	6342	5.1
2001 Sept 12	1529	5988	4.5
2001 August 7	1501	5849	5.4

You can read more about the LISImage system at http://www.path.queensu.ca/queens/lisimage.htm

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PASSWORD Tips

The security policy for passwords on our PATHNET Windows NT Domain system is:

if there are five bad passwords in the space of ten minutes, the account will be locked out for ten minutes.

This is to prevent password cracking programs from attempting thousands of password combinations.

So if you can't get in touch of Kevin to clear the locked account, simply wait 10 minutes, check your CAPS LOCK status and try again.

Laptops move

Effective 2002 Jan 02, both laptops will be moving into their new home in the locked cabinet in the Multihead Microscope Room. The key can be found in the secretaries office on Doug2. Remember to:
1) Book in the Outlook/Exchange calendar system;
2) sign in the logbook when you do remove them from the cabinet;
3) Return them promptly