

## Queen's research earns \$12 million from CFI

*High-performance computing, climate change research among projects funded in latest round of infrastructure awards*

BY ANNE KERSHAW

The Queen's-led High Performance Computing Virtual Laboratory, a consortium of four universities in Eastern Ontario, has received close to \$5 million in funding from the Canada Foundation for Innovation – one of eight Queen's research projects to win support in the latest round of CFI awards.

The foundation announced more than \$12 million in funding for Queen's research as part of an overall investment of \$363 million to support 214 infrastructure projects in 59 Canadian universi-

ties, colleges, hospitals, and not-for-profit research institutions.

"This is an excellent result for Queen's," says Dr. Bruce Hutchinson, Acting Vice-Principal (Research). "We are extremely pleased and excited about how this will advance some of our key research priorities at Queen's while, at the same time, equipping our researchers to compete in the global economy."

Queen's research projects receiving infrastructure funding are described on page 2.

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### *Fishing anyone?*

Teachers from Central Tech, Toronto ham it up at the Faculty of Education's Tech Fair last month at West Campus. Tony Rende, Sil Giacomazzo, Mike Roman and Ed Hawryliw created a fishing net frame that could be used in a high school woodworking shop project, part of a four-week course they took to add another "teachable" to their qualifications. The fair attracted hundreds of spectators and also featured an open air-barbecue and live music.

## Innovative teaching earns Queen's math professor prestigious 3M award

Morris Orzech, a professor of mathematics and statistics at Queen's whose innovative work with the internet has stimulated the learning of thousands of students, has been recognized as a 3M Teaching Fellow. Dr. Orzech is one of 10 recipients across Canada of the prestigious award, presented annually by 3M Canada and the Society for Teaching and Learning in Higher Education.

Dr. Orzech was cited for his tireless work in improving the quality of education for students, and for promoting effective teaching among his colleagues. "He has led curriculum development efforts in his own department and was among the first at Queen's to use 'incomplete notes' for a large first-year linear algebra course, a technique which



*Morris Orzech: 'Tireless work'*

keeps students involved while freeing them from making copious notes," his citation states. "These interactive notes play a key role in creating independent learners and promoting deep learning."

Dr. Orzech was one of the first to introduce a computer-based bulletin board called "MathChat" to promote discussion of classroom math issues among students, teaching assistants and instructors. This pioneering use of the Internet is now used in more than 80 Queen's courses. He works closely with the Learning Technology Unit, serving on its advisory board and presenting sessions on incorporating technology in the class-

room. He has made presentations at the unit's annual Technology Education Day and is an invaluable resource person and Instructional Development Centre instructor.

In 1995, he created the Mathematics and Statistics Teaching and Learning Seminar series that brings together motivated teachers from the department, Faculty of Education, Queen's Instructional Development Centre and occasionally other universities and high schools.

Dr. Orzech is no stranger to teaching honours; in 1998 he received a teaching excellence award from the Ontario Confederation of University Faculty Associations.

He describes the practice of teaching as being akin to that of medicine: "In each, good practice demands a desire to be helpful, a willingness to pay attention to people, an openness to ideas, care not to do harm through thoughtless experimentation, and a sense of one's limitations."

Dr. Orzech is Queen's third 3M recipient since the award's inception in 1986; previous winners were the late Bill Barnes of the Department of English, and Peter Taylor, also of the

*3M award, page 2*

## It's a new world record!

*Queen's solar car completes record-breaking trans-Canada trek*

After 29 days, and 7,044 kilometres, Queen's solar car team pulled into Science World, Vancouver, BC, at 1 pm July 29, right on schedule and smashing the world record for solar distance travel. Queen's beat the previous record of 2,522 miles (4,058 kilometers) set by an Australian team two years ago.

The team started the day in Chilliwack about 10:20 am. Radiance cruised at about 100 km/h along Highway 1, and at about 75 km/h on Highways 11 and 7. As Radiance pulled into the final stop of the tour, media and onlookers swarmed around the barricaded area. The array was lifted off the vehicle, and congratulatory applause broke out from the crowd.

The team departed from Halifax, N.S. on Canada Day, passing through Kingston and Toronto July 10 before heading north and west. The team broke the previous long-distance travel record on July 15, just west of Thunder Bay.

Queen's and major sponsors, including Ontario Power Generation (OPG), NSERC, and the Queen's University Alumni Association, were there to meet the Radiance team under sunny Vancouver skies.

"We couldn't have asked for a more perfect day to conclude our month-long road trip," team members said. "The weather was gorgeous, the sky was clear, and the temperature was just perfect." □

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**Why bugs don't freeze**

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**High performance computing infrastructure for High Performance Computing Virtual Laboratory (HPCVL) (\$4,949,000)**

HPCVL, a consortium made up of Carleton University, University of Ottawa, Royal Military College and Queen's, will support innovative research across a wide spectrum of disciplines in the sciences, engineering, medicine, social sciences and humanities. Researchers will use the computing resources of HPCVL to carry out pioneering and innovative investigations in traditional and emerging areas of high-performance computing such as complex drug design, large-scale fluid dynamics calculations, applied parallel computing and statistical modelling in economics, human brain functions and genome analysis. Project leader is Dr. Andrew Pollard of the Department of Mechanical Engineering.

**Protein Function Discovery: The next challenge of the genomics era (\$3,500,491)**

The funding will allow a team of 30 researchers at Queen's to establish a world-class research centre dedicated to the investigation of protein function. Cutting-edge technologies will allow the team to use bioinformatics to mine and decipher information from genomics and proteomics databases and experiments; to model and visualize protein structures; produce recombinant proteins for analyses; and determine three-dimensional protein structures by nuclear magnetic resonance (NMR) spectrometry and X-ray crystallography. Project

leader is Dr. Geoffrey Flynn of the Department of Biochemistry.

**Enhancement of Public Opinion and Survey Research Archives and Database (\$86,292)**

The funding will support the Canadian social science research community's ability to conduct leading-edge research on social trends, value changes and the relationship with political and economic variables in other countries. The Centre for the Study of Democracy at Queen's has established a national archive of computer data sets from opinion research on public affairs, the first archive of its kind in Canada. The funding will enable the centre to update existing software to enhance search capabilities of the database and better serve the diverse needs of the research community. Project leader is Dr. Matthew Mendelsohn of the Department of Political Studies.

**Eye-Hand Coordination: Laboratories to study the neural and behavioural basis of motor function and dysfunction (\$444,366)**

Almost all daily tasks require coordinated actions of the eyes and hands and, consequently, deficits in eye-hand coordination due to neurological disease or injury can be devastating. The funding will be used to build two laboratories to investigate eye-hand coordination with the aim of understanding the neural basis of both normal and impaired eye-arm-hand coordination. The labs will enable researchers to simultaneously measure eye, arm and hand movement and, as a result, examine the coordination of eyes and limb under a wide range of experimental conditions. Project leader is Dr. Randy Flanagan of the Department of Psychology.

**A research facility for the Next-Generation Internet (\$1,014,193)**

Funding will be used to develop a research facility in the Department of Electrical and Computer Engineering for research aimed at developing efficient systems for reducing the

complexity and cost of multi-layer networks and offering improved reliability. The challenge is to design broadband information networks that effectively manage the unprecedented demand for service while meeting requirements for reliable, cost-effective and flexible services. Project leader is Dr. Hussein Mouftah of the Department of Electrical and Computer Engineering.

**Campus Data Network Upgrade (\$1,132,266)**

The value of the Intra/Internet as a tool to deliver services and conduct research is increasingly being realized. Use of the campus data network for research is growing rapidly and requires updating. Funding will be used to replace the currently installed network wiring infrastructure in 30 campus buildings over a three-year period. The goal of the project is to enhance the capacity of the network to deliver 100Mbps to the desktop from the current 10Mbps. Project leader is Dr. Stan Yagi, Director of Information Technology Services.

**Centre for Innovative Research in Gastrointestinal Science and Disease (GIDRU) (\$1,029,567)**

Established at Queen's in 1983, the GIDRU is Canada's leading centre for the integration of research, education and clinical treatment in gastrointestinal diseases and known for its long-standing tradition of leadership in diverse areas of basic research and clinical scholarship. The centre's vision is to use novel molecular and cellular approaches to increase understanding of these widespread diseases. Funding will support the purchase of sophisticated new microscopic equipment to enhance the centre's capacity for discovery and development of improved treatments. Project leader is Dr. William Paterson of the Department of Medicine.

**Facility for Long-term Climatic and Environmental Change Research (\$238,524)**

The crux of all paleolimnological investigations of environmental change is establishing accurate and precise chronologies (time/depth profiles) in sediment cores, and consistent and accurate information about the organisms which provides clues to chronology. The funding will be used to create a state-of-the-art research facility for environmental research in sediment chronology and digital microscopy to complement Queen's existing Paleocological Environmental Assessment and Research Laboratory (PEARL). Project leader is Dr. John Smol of the Department of Biology.

CFI also announced funding of \$15,892,932 for the proposed infrastructure known as the National System-On-Chip (SOC) Research Network which will allow Canadian university researchers, students and industry to meet the challenge of the global shift from chip-based microelectronics products to those which implement complete systems on a single chip. Queen's is the lead institution for this national initiative, spearheaded by the Canadian Microelectronics Corporation. The network will provide the necessary access to computer-aided design (CAD) tools, pre-designed, reusable SOC modules or design cores, and design methodologies through a nationally distributed virtual private network (VPN), with a hub at Queen's managed by CMC. When installed, it will provide secure distribution and exchange of state-of-the-art SOC Intellectual property (IP), involving more than 30 institutions and representing a global first for such a wide-scale environment.

<http://www.innovation.ca/> □



Lourdes Tabares (centre), Rector of the University of Havana, Cuba, met with Bill James (left), acting director, International Programs Office, and Robert Silverman, dean, Faculty of Arts and Science during a recent visit to campus. Queen's and the University of Havana are in the process of formalizing an agreement to create an exchange between the two schools.

## Help Lines

Campus Security:  
**533-6111**

**Human Rights Office**  
533-6886  
Irene Bujara, Director  
Sexual Harassment Advisory  
Anti-Racism Advisory  
Anti-Heterosexism Advisory

**Sexual Harassment Complainant Advisors:**

Margot Coulter, Coordinator  
533-6629  
Barbara Moore – Education  
533-6551  
Millard Schumaker – Religion  
533-2106 \*74323  
Chuck Vetere – Student  
Counselling  
533-2893 \* 77978

**Anti-Racism Complainant Advisors:**

Stephanie Simpson,  
Coordinator 533-6886  
Audrey Kobayashi – Geography,  
533-3035

**Anti-Heterosexism Complainant Advisors:**

Julie Darke, Coordinator  
533-6886  
Eleanor MacDonald, Politics  
533-6631

**Associate Secretary of the University**  
Paul Arney 533-6495

**Sexual Harassment Respondent Advisors:**

Paul Banfield – Archives  
533-2378 \*74460  
Mike Stefano – Purchasing  
533-2210 \*74232

**Anti-Racism Respondent Advisor:**  
Ellie Deir – Education  
533-6218 \*77673

**Internal Dispute Resolution (Students & Staff):**

Paul Arney  
533-6495  
PA1@post.queensu.ca

**University Advisors – Students:**

Janice Deakin –  
Physical and Health Education  
533-6601  
Bill Gekoski – Psychology  
533-2891  
Patrick Oosthuizen –  
Mechanical Engineering  
533-2573  
Mel Wiebe – English  
533-2153

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Jane Baldwin – Surgery  
533-6302  
Brenda Barker –  
Industrial Relations Centre  
533-6628  
Kathy Beers – Student Affairs  
533-6944 \*74022  
Nancy Dorrance – ITS  
533-2017  
Larry Pattison – Physical Plant  
533-6697 \*77982  
Gary Racine – Telecommunications  
533-2233

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Don Richan 533-2378

**Employee Assistance Program**  
1 800 387-4765

**University Chaplain:**  
Brian Yealland  
533-2186

**Rector**  
Mike Kealy  
533-2733

**Student Counselling Service**  
533-2893

\*Internal number may be accessed from a touch-tone phone off-campus by dialling 533-6000 + extension number.

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Department of Mathematics and Statistics.

Later this fall Dr. Orzech will join nine other 3M Fellows from Western, York, Calgary, Victoria, Brock, Winnipeg and St. Thomas universities at a three-day retreat at Montebello, Quebec, where the winners will share their teaching experiences. □

# Gazette

Editor: Mary Anne Beaudette  
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Design: Graphic Design Services

The Gazette is published fortnightly (except during the summer) by the Department of Marketing and Communications 107 Fleming Hall, Queen's University, Kingston, Ontario K7L 3N6

Submissions are welcome, but the Gazette reserves the right to edit and print contributions as space and staff time permit.

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**DEADLINES**

Deadline date	Publishing date
5 September	11 September
19 September	25 September

**QUEEN'S TODAY**

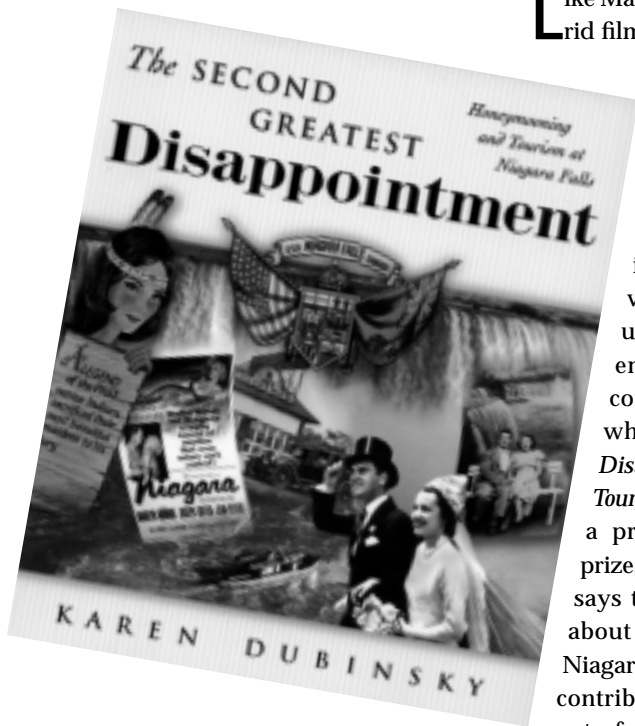
**HOMEPAGE** [www.advancement.queensu.ca/html/qtoday.htm](http://www.advancement.queensu.ca/html/qtoday.htm)

ISSN 0319-2725

# Honeymoon heaven: How a sleepy little town became symbol of North American culture

In one week, Queen's professor learns of prestigious book prize – and brings home gift from Guatemala

BY DAVID PULVER



Like Marilyn Monroe in Niagara, the torrid film that began her rise to stardom, Queen's University historian Karen Dubinsky is captivated by the sexual imagery of Niagara Falls.

The 1953 movie's publicity poster features Monroe wallowing seductively in the rushing waters at the top of the falls, unleashing "a raging torrent of emotion that even nature can't control!" Professor Dubinsky, whose book *The Second Greatest Disappointment: Honeymooning and Tourism at Niagara Falls* recently won a prestigious Canadian-American prize, is fascinated by the image. She says that because she was "curious about the long-time association of Niagara Falls with honeymooning, my contribution is to decode the waterfalls' gendered and sexual imagery, which I believe is central to the cultural meaning or 'imaginary geography' of Niagara Falls."

"Travellers," she wrote, "speak about the waterfall as though it were female, and invest it with dangerous, alluring and quite sexual powers." A Niagara Falls honeymoon was "the public declaration of heterosexual citizenship," a ritual that was at its height in the mid-'50s, making the small town an ideal place in which to observe changing attitudes to sexuality in the 19th and 20th centuries. She took the book's title from Oscar Wilde's often-quoted remarks about Niagara Falls being "the second greatest disappointment of American married life."

This summer, Professor Dubinsky, who teaches women's studies and gender his-

tory, won the Albert B. Corey Prize for her "cutting-edge" analysis of the Niagara Falls phenomenon. The prize is awarded every two years jointly by the Canadian Historical Association and the American Historical Association for the best book dealing with the history of Canadian-American relations or the history of both countries.

"This is a major international award of great significance to historians across North America," says Ian McKay, a professor in Queen's department of history who is chair of the prize committee that chose Professor Dubinsky's book for the 1998-'99 award.

Donald Akenson, Professor of History and senior editor at McGill-Queen's University Press, says that the award is "a marker of very fine scholarship in the study of Canadian-American relations and

**'This sleepy little southern Ontario town has a huge, diverse tourist population speaking every language of the world, just an amazing array of people'**

history. It is the kind of award that turns a book into required reading for the discipline."

The four-member jury of academics from Montreal, Minnesota, California and London, England, found the book "fresh and compelling."

"By focusing on a micro-region whose spectacular resources are shared by both Canada and the United States, this book reconstructs the transformation of Niagara Falls from an exclusive 'tourist site' into one of the most powerful symbols of 20th century North American culture," the jury said.

Professor Dubinsky says she is fond of Niagara Falls as a real place with real people, despite its tawdry exterior. "One of the things I like best about the Falls is that it is a really funny place. A lot of people have made a career out of laughing at it; I

was quite conscious of trying not to do that, because it is an easy place to play for cheap laughs, and that's not what I wanted to do."

"If you go there on any nice summer afternoon, there are still huge numbers of people from all over the world. This sleepy little southern Ontario town has a huge, diverse tourist population speaking every language of the world, just an amazing array of people."

Professor Dubinsky says she had intended to travel to the Canadian Historical Association annual conference in Edmonton to accept her \$1,000 prize when she learned that another major event in her life was about to take place: after a year of delays and frustrations, the final bureaucratic hurdles had been removed to her adoption of a sixth-month old Guatemalan boy, Jordi. She flew to Guatemala City with ideas for her next book already percolating.

"The process of getting Jordi was difficult and frustrating, but it was also really fascinating, and it raised all kinds of questions about why adoption has become so complicated and expensive, and why only people with middle-class incomes can even think about adoption.

"It got me thinking about how we ended up with this hugely bureaucratic and cumbersome system. I'm a historian and I guess I think in terms of the origins of things." □



Author Karen Dubinsky with son Jordi

## Queen's team finds treatment for painful bladder disease affecting women

BY ANNE KERSHAW

Queen's University anesthesiologist and two urologists have discovered an effective treatment for a painful and often debilitating bladder disease that affects more than half a million North Americans, mainly women.

There is currently no cure for the inflammatory bladder disease, called interstitial cystitis, which is essentially a life-long urinary tract infection that results in a need to urinate as often as every 15 to 30 minutes and causes severe burning pain.

"This is a chronic and, at times, excruciatingly painful condition that gets in the way of any kind of normal life. These patients, 90 per cent of whom are women, live with this permanently and are waking up four to six times at night," says Dr. Richard Henry, an expert in topical anaesthetics. In the most severe cases, women may opt to have their bladders excised but even this drastic step doesn't always guarantee that pain will cease, he says.

Dr. Henry, who presented the findings recently at the annual meeting of the Canadian Urology Association meeting in Kelowna, BC and Queen's urologists Dr. Curtis Nickel and Dr. Alvaro Morales, have found that a well-known local anes-

thetic drug called lidocaine, when administered with sodium bicarbonate, can be highly effective in alleviating the pain associated with interstitial cystitis and may even permanently reduce inflammation or cure the condition. Although local anesthetics have been used in the bladder, the acidity of the urine prevents the drug from absorbing into the bladder wall where it is needed to work.

The Queen's researchers have identified a concentration of lidocaine that, combined with sodium bicarbonate, promotes optimal absorption of the anesthetic into the bladder. Although lidocaine is primarily recognized as an anesthetic, it also has recently been found to have excellent therapeutic anti-inflammatory effects.

In Dr. Henry's study involving 12 patients with interstitial cystitis, eight experienced a dramatic reduction in pain and some were able to cease treatment altogether. "We have seen the patient's pain alleviated within a few minutes of treatment," Henry says. As well, there are indications that this treatment approach, when used for prolonged periods of time, could also control the inflammation associated with the disease. □

## Queen's researchers prove expectant fathers experience hormonal changes

Recent research findings by Katherine Wynne-Edwards and graduate student Sandra J. Berg reveal that expectant 'dads' have higher estradiol, or estrogen, the female sex hormone, and lower testosterone and cortisol levels. Animal studies have linked nurturing with lower testosterone levels and higher estrogen levels. The researchers presented their results from the first longitudinal study of men becoming fathers at an endocrinology conference held recently in Toronto.

The researchers collected weekly saliva samples from 33 couples recruited from childbirth classes, from the first trimester through to three months after birth. Some volunteers provided daily samples in the



Katherine Wynne-Edwards: Examining the biological basis for fatherhood

weeks before the birth, and even more frequent samples during labor and delivery. Samples were also collected from a control group of non-fathers.

"The results of our research suggest that men are experiencing hormonal changes associated with parenthood and that those changes are broadly similar to maternal changes," says Dr. Wynne-Edwards. "Our results also demonstrate that the biological basis for involved fatherhood is worthy of further endocrinological investigation."

The next step in the research will involve cross-cultural studies to determine if men from cultures in which parental involvement differs have similar hormonal changes. □

## News Notes

### Virtual institute receives SSHRC funding

Harvey Lazar and an interdisciplinary team of Queen's researchers recently received a \$180,000 grant from the Social Sciences and Humanities Council of Canada. Dr. Lazar, director of the Institute of Intergovernmental Relations, School of Policy Studies, will use the award to establish a virtual Canadian Institute of Federalism Studies (CIFS), a network of scholars dedicated to research and teaching in all areas of federalism and intergovernmental relations. The institute would provide guidance, support to scholars and encourage interdisciplinary research, broadening the scope and nature of federalism studies in Canada.

CIFS plans to take full advantage of electronic and web-based technology, developing web-based discussion groups, searchable archives, virtual conferencing and a web-based publishing unit. The site, slated to launch later this year, will be a bilingual "mirrored" website, with the main pages, bibliography and publications accessible in French or English.

The publishing initiative will focus on a series of peer-reviewed electronic publications that meet the same standards as more traditional forms of academic publishing. Other Queen's people involved in the project are Douglas Brown, John McLean, Ronald Watts and Hamish Telford of the Institute of Intergovernmental Relations; Keith Banting and Kathy Brock, Policy Studies; Robin Boadway, Economics; Janet Hiebert and Peter Leslie, Political Studies and Daniel Soberman, Law.

### Power shutdown for JDUC

The John Deutsch University Centre will shut down tomorrow, Aug. 15, from 5 pm to midnight to allow repairs to the university's high-voltage infrastructure. However, the shutdown will not affect the Graduate Residence or the elevator, says Larry Pattison of Physical Plant Services.

### MS, kidney groups fund Queen's research

Queen's University's MacKenzie Health Services Research Group has been awarded more than \$200,000 for two research projects investigating the quality of life of people with kidney disease and multiple sclerosis. The research team of nurses Carol Meers and Margo McMurray, researchers Wilma Hopman and Alicia Paris Pombo and physician Michael Singer received \$90,675 from the Kidney Foundation of Canada for their two-year study of the quality of life of patients receiving kidney dialysis. A second project involving researchers Wilma Hopman, Donald Brunet and Michael Singer, received nearly \$125,000 for three years from the Multiple Sclerosis Society of Canada for a three-year study of changes in the quality of life of people with multiple sclerosis. Ultimately the researchers hope to offer more comprehensive measures for determining health-related quality of life for people with these chronic conditions.

### Campus Security offers self-defence for women



Campus Security offers women's self-defence courses for staff and faculty this summer. The Rape Aggression Defence System course offers women practical defence techniques that require no special training, as well as basic information on personal safety, awareness, risk reduction and avoidance. The next course takes place Saturday, Aug. 19, 9-5 pm. Free for students, \$15 for staff and faculty (to cover cost of manual). Information and registration: 533-6080 or visit the programs link at [www.queensu.ca/security](http://www.queensu.ca/security).

### Museum of Health Care introduces new website



The Museum of Health Care for Eastern Ontario has taken a step onto the international stage by launching its new website. The website brings the museum, housed in the Ann Baillie building at Kingston General Hospital, to a worldwide audience of medical researchers and the public.

Established in partnership with Queen's University, the museum is home to more than 16,000 artifacts, from surgical tools to lab instruments, and is one of the largest collections of its kind in Canada.

The website contains articles and photos about museum events, history and background information and a database of 3,700 artifacts. The museum first ventured onto the Internet two years ago with an online database and supporting information, hosted on a site provided by Gene Clevenger of the Library System and Queen's University. The site can be found at: <http://www.museumofhealthcare.on.ca>

## National study to test nitroglycerin as treatment for premature births

*Queen's-led research offers hope for safe, effective drug to combat pre-term delivery*

BY ANNE KERSHAW

A national, Queen's-led study of about 600 women experiencing premature labor will be launched this fall to test the effectiveness of nitroglycerin patches in reducing pre-term births.

The five-year study, which will involve about 15 teaching hospitals across Canada, including Kingston General Hospital, Mount Sinai and Women's College Hospital, is being funded with \$1.3 million from the Canadian Institutes of Health Research.

The study comes at a critical time, says Dr. Graeme Smith, who is with Queen's Department of Obstetrics and Gynecology. Ritodrine, one of the few drugs known to have some beneficial effect, will be withdrawn from the Canadian market next month.

"The problem right now is that the drugs we have available to us are not very effective and the only one shown to have any significant effect, at least for 48 hours, is being discontinued as of September," says Dr. Smith.

"This means there is going to be one less alternative to turn to and that's why it's even more important to do the trial and find something that's both effective and safe. Right now there is nothing like that."

Currently, about seven per cent of the 450,000 babies born in Canada annually are premature. This has increased by about one per cent (4,500 births) since the mid-'80s - a change largely attributed to an increase in multiple births caused by fertility treatments.

The devastating, long-term health problems associated with pre-term delivery include blindness, deafness, cerebral palsy and chronic breathing problems. The associated health costs are staggering, says Dr. Smith. The two major obstetric conditions affecting long-term health costs are pre-eclampsia (high blood pressure) and pre-term delivery. Anything that

**'Anything that reduces the incidence of pre-eclampsia and premature delivery will have an almost instantaneous effect on health-care costs across the country'**

reduces the incidence of either of them will have an almost instantaneous effect on health-care costs across the country.

Nitroglycerin, long used as an effective treatment for heart patients, reinforces the body's inherent ability to relax blood vessels by metabolizing into nitric oxide, a naturally occurring molecule that causes normal relaxation of blood vessels. The Queen's research, which began in the early 1990s, is premised on the assumption that the lining of the blood vessels and the uterus, both smooth muscles, may be similarly affected by nitroglycerin treatment.

There are two parts to the Queen's-led study. It will, over three years, examine the effects of nitroglycerin on labour and delivery. As part of a two-year follow-up study, the researchers will be monitoring the health of babies who are born prematurely. □



Music educator Sheila Woodward of South Africa uses a noisemaker to entrance a young listener at the Faculty of Education's Music in Every Child conference, held at the Agnes Etherington Art Centre earlier this summer.

# Lightening the load for Canada's military

## Queen's ergonomics researchers bring new insights into military backpack design

STORY AND PHOTO BY MARY ANNE BEAUDETTE  
Soldiers around the world may soon be carrying the weight of Queen's University research on their backs – but without the blisters and sore muscles that have accompanied their 35-kilo (80-lb) loads in the past.

An ergonomically designed backpack for Canada's military currently being tested at CFB Gagetown has passed muster at a unique testing and evaluation system invented by Queen's University's Ergonomics Research Group (ERG), a multidisciplinary team that specializes in designing evaluation tools for workplace products and worker practices.

The group's innovations in pack design and testing technology were presented to "load carriage" specialists from around the world last month when the

ERG hosted a conference in load carriage design and assessment for research and technology experts from NATO and Partners for Peace nations.

The Queen's group, comprising Tim

**'It's a very high-tech assessment system and it's the only one like it in the world. We're hoping that our design-based approach will be instrumental in changing the way we think about backpacks'**

Bryant, professor of Mechanical Engineering at Queen's, Susan Reid, mechanical engineer, and Joan Stevenson, professor of Physical and Health Education, was commissioned by the Defence and Civil Institute for Environmental Medicine to assist in developing a strategy for testing backpacks (or load carriage systems, as they're called in the military). Since 1995 the group has been developing computer-controlled simulators for testing the weight, stiffness and load distribution in backpacks.

The ERG's unique technology allows the researchers to measure and evaluate such vital details of pack design as skin contact pressure and force, pack-wearer motion, and strap tension. "It's a very high-tech assessment system and it's the only one like it in the world," says Joan Stevenson, coordinator of the project. "We're hoping that our design-based approach will be instrumental in changing the way we think about backpacks."

Their Load Carriage Simulator, named Barney, is a solid-state, sensor-wired manikin. Barney wears all the gear of a regular soldier, including helmet, shrapnel vest and backpack. He is one of three ERG-developed simulators that can bend and twist at the waist and be programmed to walk, jog or run. Adjustable weighting lets researchers test the effects of loads for different stages of battle readiness, while varying-sized versions of Barney allow comparisons of load carriage on differently sized bodies.

"Load cells built into the manikins help

us figure out how much muscular force is needed to carry and control the load," says Dr. Stevenson. "These cells help us to separate the responses of the pack from the person."

Getting the right fit between pack and person is important, Dr. Stevenson explains. "A poorly fitted pack can cause serious injuries. Badly fitting straps, for example, can cause pinched nerves in the armpit, injuring the arm." As well, a poorly suspended pack will "fight" the wearer, forcing him or her to expend precious energy in order to counterbalance the weight. "Most people do not realize that their bodies must exert forces equivalent to twice the weight of the pack just to carry it."

"The goal is to standardize this system so that you can understand design implications," says Dr. Stevenson. "It's very difficult to correct design problems in a pack after it is built. This way you can pinpoint the problems and design the packs for a better fit."

The group has developed a validated method of predicting the field performance of the backpack in terms of the overall effect on the user's mobility, agility and comfort.

"The beauty of this system is, the human factor is being built in from the beginning. We estimate it would cost the military just \$5 more per pack to build in the science from the beginning," Dr. Stevenson says. "And if you're spending \$30 to \$40 million to outfit all military personnel, you want to make sure the load carriage systems are the right fit."

After testing more than 20 packs from military forces around the world, including the Netherlands, France and the U.S., the Queen's researchers hope to set tolerance limits for the design of military load carriage systems. "Just as there are suggested tolerance limits for chemicals in the air, we need to set standards about how much force is too much," Dr. Stevenson says. "This goal will require further basic research before minimum acceptable standards can be established."

Anticipated design breakthroughs in backpack suspension systems may not only benefit the soldier; civilian hikers may also find that the Queen's research has considerably lightened their load.

<http://www.phe.queensu.ca/ergbio/> □



Mary Anne Beaudette

Joan Stevenson, coordinator of the load carriage project, with Barney, the Ergonomics Research Group's one-of-a-kind backpack simulator manikin: Building in the human factor from the beginning of the design process

## CIDA extends funding for Queen's-Bosnia family medicine project

BY NANCY MARRELLO

Queen's University's family medicine project in Bosnia-Herzegovina has been awarded \$2.5 million from the Canadian International Development Agency (CIDA) to complete an ambitious project to reform the country's health care delivery system.

"Our success is greater than we ever anticipated at the beginning," says Dr. Geoffrey Hodgetts, project director and professor of family medicine at Queen's. "We have quadrupled our initial goal of establishing one family medicine teaching unit with about 25 students."

In fact, with an initial \$4.7 million CIDA grant 3 years ago, Queen's devel-

oped family medicine programs at universities in Sarajevo, Tuzla, Mostar and Banja Luka. The new funds will extend the project by 22 months, enabling the first 105 family medicine students enrolled in the two-year program to graduate.

"In North America, the idea of a family doctor is taken for granted," says Dr. Hodgetts. "But in many parts of Eastern Europe, including the former Yugoslavia, the health-care system is based on service delivery in large institutions, so the personal, continuous, and co-ordinated care of a general family physician is not available."

In addition to Dr. Hodgetts, who has spent the past five years in Bosnia, the Queen's team consists of eight members

of Queen's family medicine department and six community physicians. Team members deliver seminars, supervise residents and teach students in family medicine for three weeks at least twice a year in Bosnia.

Dr. Hodgetts believes CIDA should be commended for choosing to fund a long-term, methodical project. "The Canadian strategy was very wise," he says with pride. "This is a project in which the largest numbers of patients will benefit, and in which Queen's continues to build alliances with Bosnian health care professionals."

<http://www.queensu.ca/fmed/Bosnia/project.htm> □

## People

**Suning Wang** (Chemistry) has been awarded the Rutherford Memorial Medal (Chemistry). It is awarded for outstanding research in any branch of chemistry, with some preference being given to candidates under age 40 in the year of the award. Dr. Wang came to Queen's from the University of Windsor in 1996. Her research focuses on synthetic inorganic/organometallic chemistry and their applications in material science.

**James Leith** (Professor Emeritus, History) received the distinguished medal of the Institute on Napoleon and the French Revolution at the 30<sup>th</sup> meeting of the Consortium on Revolutionary Europe at University of Alabama. The medal recognized Dr. Leith's contributions to students.

**Reg Pearce**, Queen's executive chef, was profiled in the May issue of *Foodservice and Hospitality* magazine. □

# Canadian scientists find potent antifreeze protein that equips insects to brave winter

*Research offers potential weapon against spruce budworm, offers promise for frost-resistant crops*

BY ANNE KERSHAW

Researchers from Queen's University and the University of Alberta have gleaned the precise structure of winter protection proteins derived from insects, knowledge that could greatly benefit Canadian agriculture. The antifreeze proteins were found to be up to 100 times more powerful than similar proteins found in fish.

In two studies published July 21 in the international scientific journal *Nature*, Queen's biochemist Peter Davies and his colleagues describe the unusual beta helix structure of the antifreeze proteins, the secret to some insects' ability to survive winters in temperatures as low as minus 30 degrees Celsius.

The new findings build on earlier research by Drs. Davies and Zongchao Jia and their students that explained how ocean fish survive Arctic waters as a result of the antifreeze proteins in their blood. Four years ago, the Queen's biochemists revealed the structural basis for how the fish proteins bind irreversibly to ice crystals and stop them from growing.

A secondary benefit of the research may be a powerful weapon in the fight against the spruce budworm, the scourge of the boreal forests of eastern Canada,

and the mealworm beetle, commonly found where grains and animal feeds are stored. The Queen's researchers have isolated and documented the molecular structures of two "hyperactive" antifreeze proteins in these two insects.

"This is very exciting. These proteins are far more potent than those found in fish,"



*Tenebrio larvae: Super-active antifreeze proteins*

says Dr. Davies. "With this information, we can go on to modify other molecules to produce new antifreeze proteins that mimic these or are even more effective."

The findings hold promise for agriculture in the event that antifreeze proteins can be used to make plants frost-resistant and extend both the growing season and the geographic areas in which crops can be grown. They may also represent a breakthrough for the frozen food industry. "By controlling the size of ice crystals in frozen foods, you can extend the shelf life of these products," Dr. Davies says.

Other members of the research team

include Virginia Walker, an expert in the molecular biology of insect development, and Brian Sykes from the University of Alberta, an expert in structural biology and nuclear magnetic resonance.

Antifreeze proteins are found in some fish, insects and plants. They bind to ice crystals and prevent them from growing to a size where they would damage the host. The Queen's research involves the isolation and characterization of antifreeze proteins from different sources, and the cloning and expression of their genes to produce recombinant proteins for three-dimensional structural analysis by nuclear magnetic resonance spectroscopy and X-ray crystallography.

The rather unusual beta helix structure of the antifreeze proteins of the spruce budworm and the mealworm beetle – coil-like with a flat surface – is highly efficient for binding to ice surfaces.

This collaborative research in the four labs has been funded by grants from the Medical Research Council, the Natural Sciences and Engineering Research Council, and the Killam Foundation.

<http://meds-ss10.meds.queensu.ca/medicine/biochem/> □

## Noted and Quoted

Highlights of Queen's experts in the news

**David McDonald** (South African Migration Project) is featured in the cover story about municipal restructuring in South Africa in the July issue of *Municipal World* magazine.

**Jonathan Rose** (Political Studies) and author of a book on government advertising, was quoted in the *National Post* about the United Nations report ranking Canada high on the list as a place to live.

**Thomas Courchene** (Policy Studies) was quoted July 12 in a *Maclean's* magazine feature about the Mexican presidential campaign.

**Vincent Sacco** (Sociology) was quoted July 19 in a *National Post* article about Statistics Canada's report that the crime rate in Canada is at a 20 year low. His comments on the decline in the national crime rate appeared July 19 in the *Calgary Herald*, *Kamloops Daily*, *Prince George Citizen*, *Peterborough Examiner*, *Victoria Times*, *Saskatoon Star* and the *Brantford Expositor*.

**Peter Davies** (Biology) and his team of researchers received extensive national media coverage of their research into antifreeze proteins, including stories in the *National Post*, the *Ottawa Citizen*, the *Edmonton Journal* and the *Calgary Herald*, as well as interviews with CTV and 12 CBC radio stations across Canada. Dr. Davies was also contacted by Minnesota Public Radio, the *Laboratory Focus Magazine*, Food Online, and R and D Managers newsletter.

CBC radio's Ontario Morning interviewed Queen's medical student **Sarah Simkin** on the provincial government's plan to reimburse medical students who set up practice in northern or rural areas.

**Queen's Solar Car's** world distance record was highlighted on the ABC News website, CNN and CTV News, as well as in the print in the *Montreal Gazette*, *Edmonton Sun*, *Kamloops Daily News*, *Vancouver Province*, *St. John's Telegram*, *Cape Breton Post*, *Cornerbrook Western Star*, *National Post* and the *New Glasgow Evening News*.

**Merv Daub** (Business) was quoted in the *Montreal Gazette* July 31 on the "impact effect" of the expansion of Nortel Networks Corp. and Bombardier Inc.

**Don Stewart** (Law) was interviewed on CBC's *The National* magazine July 26 on the Criminal Code and anti-gang legislation.

**Kevin Hall** (Civil Engineering) and scientific director of Queen's Centre for Water and the Environment was featured in the *Globe and Mail's* page 1 feature on water in the environment on Aug. 6.

**Tara MacDonald** (Psychology) was featured July 1 in the *Globe and Mail* about her research on the relationship between alcohol and risky behaviour. □

## Queen's in the Past



### Memories of morgue set Albert's spine a-tingling

BY DAVID PULVER

Retired lab technician Albert Vowles still gets chills down his spine when he recalls a bizarre encounter with a corpse that occurred 60 years ago in the morgue used by Queen's University's medical school and Kingston General Hospital.

Vowles re-lives the ordeal in his just-published autobiography, *Out of the Depths*. In the 1930s he had been working in Toronto at the Banting Institute when he was offered more money to work in pathology at Queen's.

"I journeyed to Kingston in the first week of September 1939 to begin my new assignment as a technician in a pathology and bacteriology laboratory," he writes. "I arrived on the day that the great might of the German army invaded Poland... Kingston became a hive of military activity: the army bases were training thousands of recruits, the shipyard was building corvettes, flyers were being trained at the city's airport, and army doctors at Queen's University's medical school... Industry was on a war footing, and the people on war rations..."

Vowles worked in the Richardson Laboratories of Queen's University, connected to KGH. With his photographic memory, he recalls that adjacent to the front entrance, his workroom and the medical museum were on one side and the morgue on the other, the morgue and autopsy room layout matching almost identically that of the Banting Institute.

"The bodies were brought in on the basement level of the amphitheatre, and placed on the post-mortem table at the same level, with tiered seats rising to the main floor for students and observers. The

second floor of the building housed the bacteriology laboratories; I no longer participated in this work, but only in pathology and photography. Nor did I work with a coroner or have opportunities to augment my salary with payment for blood transfusions [as I had at the Banting Institute]. I must now live on my monthly paycheque alone.

"In the morgue, I had a chilling experience. My work included assisting at post-mortems, and one day a body came over from the hospital and we were required to perform the usual procedure immediately to accommodate the family. The pathologist asked me to start the autopsy, and said he would be there in a few minutes.

"I started, opened the torso and the rib cage, and peered in. The heart began to flutter.

"I've opened up a living body," I exclaimed to myself. "I called the doctor, declaring: 'It's an emergency, come right away!' He came on the run. Together we looked at a heart that was still fluttering, but now much less than it had been. The doctor assured me that this sometimes happened – a heart not pumping, yet fluttering after death. Whew! I had never seen this phenomenon before."

Vowles says that he found the photography he did for Queen's medical school challenging.

"I could not claim professional status, but only declare myself a photography hobbyist; however, I don't think anyone found out, as indicated by the volume of work I received. The surgeons called me to photograph unusual operations, my department head had me take all the pic-



Lab technician Albert Vowles: 'Broadening my knowledge of the adversities of life'

tures for his new textbook on pathology, and students brought me film to be processed and printed of their nude girlfriends, or wives, to take with them when they went overseas in the medical corps during World War II. There was no acknowledgement of the photographer in the pathology textbook. However, some recognition came for a paper I wrote on new methods for mounting museum specimens."

Vowles left Richardson Laboratories and the medical school soon after he married his Toronto sweetheart, Edna May, in 1940. The newly opened Du Pont Canada nylon plant offered him more money to work in its laboratories.

"Goodbye Queen's University, Kingston General Hospital, pathology and bacteriology," he writes. "The time spent in these jobs, in both Toronto and Kingston, broadened my knowledge of the adversities of life and the weaknesses of the flesh." □



## Please Note:

- Departments requiring casual hourly paid secretarial or clerical assistance should contact Patti Evaristo in Human Resources, 533-2070.
- Requisitions for staff replacement, with appropriate approvals, must reach the Human Resources Department by noon of the Monday one week prior to the date of issue.
- Applications received from internal candidates will be acknowledged by the Department of Human Resources. The results of each competition will be posted under the *Gazette* heading "Appointments" as soon as possible after the conclusion of the recruitment and selection process.
- Closing date for the following positions is **Tuesday, Aug. 22, 2000 at 4:30 pm**. Late applications will not be accepted. Please submit a letter of application indicating the specific position desired and a detailed resume including your employee number.

Resumes will be accepted from Queen's employees with Internal Status ONLY unless the position specifically invites External applications.

*Queen's University has an employment equity programme, welcomes diversity in the workplace and encourages applications from all qualified candidates including women, aboriginal peoples, persons with disabilities and racial minorities.*

## Appointments

Electrical Technologist 2000-26  
Electrical and Computer Engineering  
**Mike Vanberkel**

Education Abroad Advisor 2000-30  
International Centre  
**Katherine Jennings**

Learning Support  
Coordinator/Counsellor 2000-32  
Health, Counselling and Disability Services  
**Brenda McOuat**

Coordinator, University Exchanges and Study Abroad 2000-54  
Office of the University Registrar (Admission Services)  
**Maryann Severin**  
(Faculty of Arts and Science)

Caretaking Attendant 2000-55  
University Residences  
**Clive Strachen**

Caretaking Attendant 2000-56  
University Residences  
**Fred White**

Parking By-law Officer 2000-60  
Physical Plant Services  
**Doris Bell**

Administrative Secretary 2000-66  
Department of Medicine  
**Julia Stevenhaagen**

Administrative Secretary 2000-69  
School of Graduate Studies and Research  
**Debra Hamilton**  
(Graduate Studies and Research)

## Staff Vacancies

Following the completion of the Queen's Job Evaluation (CJE) review for positions in Grades 2 - 9, you will notice we have included the cluster in the following job ads which represents the job family, branch and grade (e.g., ADMG5 is Administration Family, General Branch, Grade 5). Generic position overviews for clusters can be found on the HR website at [www.hr.queensu.ca](http://www.hr.queensu.ca).

Specific job overviews for positions advertised under 'Staff Vacancies', with the exception of CUPE Local 229 postings, continue to be available in the HR department.

\*If you wish to be considered for the following position, apply in writing to Patti Evaristo, Human Resources.

### Senior Secretary 2000-82 Postgraduate Medical Education Faculty of Health Sciences

This is a three-year term appointment.

**Major Responsibilities:** provide secretarial support to the Manager of Postgraduate Medical Education; type correspondence and reports; maintain office files; perform data entry and retrieval on a variety of software programs; maintain the electronic calendar for office staff; maintain and update the departmental website; arrange meetings, room bookings and catering when required; and act as receptionist for the office.

**Requirements:** one-year of post-secondary education in business administration practices (consideration will be given to the equivalent combination of education and experience); fast and accurate keyboarding skills (minimum of 60 wpm); ability to operate a variety of office machines in particular, a personal computer (preferably Macintosh) and a dictaphone; proficiency with word processing (Microsoft Word preferred), spreadsheet (Microsoft Excel preferred) and database (Filemaker Pro essential) software; ability to update webpages using Claris; excellent interpersonal and communication skills; sound organizational skills and ability to work under pressure, with constant demands and interruptions, in order to meet competing deadlines; ability to exercise tact, discretion, confidentiality and diplomacy when dealing with a wide variety of people; must have attention to detail and possess a sense of responsibility for one's work.

**Minimum Hiring Salary:** \$28,338 Salary Grade 4 - ADMG4

\*If you wish to be considered for the following positions apply in writing to Pat Eaton in Human Resources.

### Student Resource Assistant 2000-83 Continuing and Distance Studies

**Major Responsibilities:** report to the Director; perform receptionist and clerical support duties including word processing and typing, scheduling, faxing and copying; prepare routine correspondence, data management and information distribution; monitor email correspondence and address requests; assist with registration functions; provide support to non-credit programs including on-site assistance and registration functions; assist the Exam Coordinator with correspondence course exam arrangements; provide support to Continuing and Distance Studies staff as required.

**Requirements:** one year post-secondary training in administration practices (or an equivalent combination of education and experience); previous relevant experience in an office/service environment; proficiency with word processing and database skills and familiarity with electronic mail; excellent interpersonal, communication, writing, organizational, time management and problem-solving skills; must be service-oriented with the ability to maintain strict confidentiality; knowledge of the university's structure an asset.

**Minimum Hiring Salary:** \$28,338 Salary Grade 4 - ADMG4

### Coordinator, Residence Life Activities 2000-84 Queen's University Residences

**Major Responsibilities:** report to the Associate Director (Residence Life); coordinate and assist with residence life activities associated with recruitment, selection, orientation/training, performance assessment and formal recognition of live-in residence life staff; provide administrative support for the Associate Director; undertake research and other administrative duties; liaise with other departments with respect to special events, projects, training, etc.; serve on Residence Management team; assist in the preparation of publications, electronic newsletters, manuals, etc.; liaise with Residence Student government.

**Requirements:** graduation from a two-year program in business administration (or an equivalent combination of education and experience); direct experience with the coordination of residence life functions and special events; demonstrated interest and understanding of university students and issues; creativity, initiative and mature judgement; ability to deal with confidential material on a regular basis; excellent organizational, planning, scheduling, interpersonal and communication skills; proven ability to work collaboratively on a team and independently;

demonstrated technical proficiency and an understanding of a wide variety of computer software applications including familiarity with web-based design and maintenance tools; demonstrated research skills including the ability to generate analyses and reports.

**Minimum Hiring Salary:** \$33,686 Salary Grade 6 - ADMSF6

## Other Positions

### Research Technician Department of Anatomy and Cell Biology

**Qualifications and responsibilities:** general maintenance of the laboratory and performance of experiments in drug metabolism and chemical toxicity. Experience with animal work, radioactive chemicals, chemical synthesis, protein purification and high performance liquid chromatography will be an asset. Salary is commensurate with experience.

**Apply to:** Dr. P. G. Forkert, Department of Anatomy and Cell Biology, Botterell Hall, Queen's University, Kingston, Ontario K7L 3N6. Telephone: 533-2854. Email: [forkertp@post.queensu.ca](mailto:forkertp@post.queensu.ca)

### Divisional Assistant Division of General Internal Medicine, Faculty of Health Sciences

This is a one-year contract working 100% time with the possibility of renewal.

**Major Responsibilities:** report to the Division Chair; provide assistance to the Division Chair and colleagues in the administration of the academic functions of the Division of General Internal Medicine; coordinate work and supervise hospital support staff who work in the division; manage divisional accounts and budgets; perform MedLine literature searches and retrieve journal articles from the medical library.

**Requirements:** successful completion of a two-year community college secretarial program with some training in accounting (consideration will be given to the equivalent combination of education and experience); medical terminology; excellent oral and written communication skills; experience in an office management or senior secretarial position, preferably in an academic, medical or hospital setting; demonstrated leadership skills; ability to exercise sound judgement and discretion in interpersonal relations and the handling of confidential material; previous supervisory experience; knowledge of the Faculty of Health Sciences and its affiliated teaching hospitals and formal training in human resources management will be considered assets; proficiency with word processing, database management, spread-sheet applications.

**Minimum Hiring Salary:** \$29,706 Salary Grade 5 - ADMG5

**Apply to:** Department of Medicine, Etherington Hall, Room 3034, 96 Stuart Street, Kingston, ON, K7L 3N6.

## Obituaries

The following employees have recently passed away:

**Evelyn Howard** (March 8, 2000)  
Member of Queen's community since July 1, 1966

**George Ambury** (April 22, 2000)  
Member of Queen's community since July 1, 1971

**Robert Whitehead** (April 27, 2000)  
Member of Queen's community since Nov. 1, 1978

**Jean K. McBratney** (May 14, 2000)  
Member of Queen's community since July 1, 1938

**Frank Van den Tillaart** (May 17, 2000)  
Member of Queen's community since Aug. 8, 1956

**George Martin** (May 18, 2000)  
Member of Queen's community since Nov. 13, 1974

**Jan T. Carrick** (May 21, 2000)  
Member of Queen's community since Aug. 23, 1982

**W. Hugo Evans** (May 21, 2000)  
Member of Queen's community since Aug. 1, 1948

**David C. Smith** (May 22, 2000)  
Member of Queen's community since July 1, 1960

**M. Jean McMachen** (May 25, 2000)  
Member of Queen's community since Sept. 11, 1978

**Pamela Caldicott-Cock** (May 29, 2000)  
Member of Queen's community since Oct. 10, 1961

**Lyle Werden** (May 30, 2000)  
Member of Queen's community since Feb. 3, 1969

**James E. Duncan** (June 4, 2000)  
Member of Queen's community since Dec. 14, 1962

**Wallace Murray** (June 7, 2000)  
Member of Queen's community since April 13, 1970

**Lewis W. Tuepah** (June 15, 2000)  
Member of Queen's community since Jan. 26, 1970

**Reginald Lau** (June 19, 2000)  
Member of Queen's community since Sept. 1, 1983

**Denis Marshall** (June 23, 2000)  
Member of Queen's community since July 1, 1989

**Evelyn Gillingham** (June 27, 2000)  
Member of Queen's community since June 1, 1947

**Gwendoline V. Paxton** (June 24, 2000)  
Member of Queen's community since July 1, 1973

**Victor Lee** (July 8, 2000)  
Member of Queen's community since Sept. 1, 1968

**Alfred A. Gross** (July 16, 2000)  
Member of Queen's community since July 24, 1972

# Bulletin Board

## Appointments

### New appointments, Faculty of Applied Science

Robin Hutchinson  
Chemical Engineering  
Kent Novakowski  
Civil Engineering  
Gabriel Ciccarelli  
Mechanical Engineering  
Carlos Saavedra  
Electrical and Computer Engineering

## Committees

### Review of Animal Care at Queen's University

Dr. David Walker, Dean of Health Sciences, is establishing a committee to provide advice to the Dean and to the Vice Principal (Research) on Animal Care and Services at Queen's University. The scope of the committee's mandate will include administrative structure and reporting relationships; physical facilities; and externally mandated guidelines and legislation. The advisory committee will

review the recommendations of the External Report on Animal Care and Services commissioned by the Vice Principal (Research), receive input from the university community, and review the report of the Associate Vice Principal (Human Resources) on the internal organization of Animal Care Services.

Faculty members, staff and students are invited to submit suggestions for committee membership. Send nominations for the committee, in writing, by **Aug. 25, 2000** to Dr. David Walker, Faculty of Health Sciences, Room 234 Botterell Hall, or by fax to 533-6884 or email [kab1@post.queensu.ca](mailto:kab1@post.queensu.ca).

### Headship Selection Committee Department of Electrical and Computer Engineering

John Cartledge's term as Head of the Department of Electrical and Computer Engineering ends June 30, 2001. Dr. Cartledge does not wish to be considered for reappointment.

In accordance with the terms of the Collective Agreement between Queen's University Faculty Association and Queen's University at Kingston, a committee will be formed to consider the present state and future prospects of the Department of Electrical and Computer

Engineering, and to assist the principal in the selection of Dr. Cartledge's successor. Members of the bargaining unit in the Department of Electrical and Computer Engineering will elect five members of the selection committee.

Faculty members, staff and students are also invited to nominate staff and students from the Department of Electrical and Computer Engineering and faculty members from cognate disciplines for membership on the selection committee. Nominations should be sent to Dean Harris (Chair), by **Aug. 31, 2000** (revised from Aug. 1, 2000).

# Bulletin Board *continued*

## Headship Review

### Department of Religious Studies

Pamela Dickey Young's term as Head of the Department of Religious ends June 30, 2001. Dr. Dickey Young is willing to consider reappointment if it is the wish of the university community.

Faculty members, staff and students are invited to submit their comments on the present state and future prospects of the Department of Religious Studies to the Chair of the committee, Dean Robert Silverman, by **Friday, Sept. 1, 2000**. All letters will be reviewed by the selection committee and will become part of the record of decision-making.

### Principalship Search Committee Queen's Theological College

At the annual general meeting of the Board of Management of Queen's Theological College, the appointment of Daniel Fraikin as Acting Principal Designate of QTC from Sept. 1 to Sept. 30, 2000, and as Acting Principal from Oct. 1, 2000 to May 31, 2001, was approved. Dr. Fraikin, a New Testament scholar, has been Acting Principal, preparing the accreditation report for the Association of Theological Colleges accreditation review, which will occur in the coming year.

The work of a search committee for the Principal of Queen's Theological College has begun. Anne MacDermaid as Chair of the Board of Management will chair the committee. Membership, chosen by the following constituencies, is: Betsy Anderson, The United Church of Canada; Heather Cooke, QTC staff; Ann Cioppa, Theology student; Heather Coy and Leanne Wight, Religious Studies students; Don Macnamara, QTC Board of Management; Bill McLatchie, Queen's University, Bill Morrow, Theology faculty, Elaine Smith, Bay of Quinte Conference, Pamela Dickey Young, Religious Studies faculty.

The search committee welcomes comments regarding the present state and future expectations of the principalship should be received by the committee by **Sept. 15, 2000**.

Send nominations to Lynda Price, corresponding and recording secretary, The Search Committee for a Principal, Queen's Theological College, Theological Hall, Kingston, ON. K7L 3N6. Fax: 533-6879, email 3lmp8@post.queensu.ca or macderma@post.queensu.ca.

## Graduate Studies

### PhD examinations

Members of the regular staff at the university may attend PhD oral thesis examinations.

#### Monday, Aug. 14

**Darrah Languay**, English. Early Modern Drama and the Question of Toleration. Supervisor: P. Stevens. 517 Watson Hall, 10 am.

#### Tuesday, Aug. 15

**Simon Rutabajuuka**, History. Colonial Capitalism and Labour Regulation in Uganda, 1900-1953. Supervisor: R.W. Shenton. 207 Watson Hall, 2 pm.

#### Wednesday, Aug. 16

**Mian Gao**, Pathology. Structure and Function Analysis of the Human Multidrug Resistance Protein 1, MRP1. Supervisors: S. Cole and R.G. Deeley. 102 Richardson Lab., 9:30 am.

#### Thursday, Aug. 17

**Eman Fituri**, Electrical and Computer Engineering. Approaches for Bandwidth Allocation in Broadband Mobile Wireless Networks. Supervisor: H.T. Mouftah. 428 Walter Light Hall, 1:30 pm.

#### Friday, Aug. 18

**Christopher Tan**, Chemistry. Rational Design and Synthesis of B-Amino Acid Analogues as Antiepileptogenic Agents. Supervisor: D.F. Weaver. F411 Frost Wing, 9:30 am.

**Janelle Jenstad**, English. Change and Exchange: Merchants and Goldsmiths on the Early Modern Stage. Supervisor: E. Hanson. 517 Watson Hall, 10 am.

**David Baar**, Economics. The Sequencing of Economic Reforms: Theory and Application to Canada. Supervisor: T. Courchene. Room B204, Mackintosh-Corry Hall, 1:30 pm.

**Krista Kesselring**, History. To Pardon and To Punish: Mercy and Authority in Tudor England. Supervisor: P.K. Christianson. 521 Jeffrey Hall, 1:30 pm.

#### Monday, Aug. 21

**Juan Camus**, Mining Engineering. The Management of Mineral Resources. Supervisor: C.W. Pelley. 350 Goodwin Hall, 10 am.

#### Thursday, Aug. 24

**Annie Hsu**, Physics. Stress Effects on Magnetic Barkhausen Noise Measurements from Magnetized Pipeline Steel. Supervisor: D.L. Atherton. 201 Stirling Hall, 10 am.

#### Friday, Aug. 25

**Shishan Guo**, Chemistry. Data Mining in Crystallographic Databases. Supervisors: S. Fortier and J. Glasgow. F411 Frost Wing, 9:30 am.

#### Tuesday, Aug. 29

**Abass Braimah**, Civil Engineering. Long-term and fatigue behaviour of CFRP prestressed concrete beams. Supervisors: M. Green and T.I. Campbell. 212 Ellis Hall, 10 am.

**Corey Mackenzie**, Psychology. The Nature and Influence of Attitudes toward Seeking Professional Psychological Help. Supervisor: W.L. Gekoski. 228 Humphrey Hall, 1:30 pm.

#### Wednesday, Aug. 30

**Andrea Downie**, Psychology. The long term consequences of abnormal brain development on academic and cognitive abilities during the late elementary and adolescent years. Supervisor: K. Munnhall. 210 Craine Building, 1 pm.

**Tracey Skilling**, Psychology. Lifelong Persistent Antisociality: Measurement and Theory. Supervisor: V.L. Quinsey. 228 Humphrey Hall, 2 pm

#### Thursday, Aug. 31

**Christopher Gibbins**, Psychology. Factors affecting the development of externalizing behavior problems from birth to 48 months. Supervisor: R. Peters. 210 Craine Building, 1 pm.

## Notices

### Sexual Health Resource Centre

"Choose the Sex of your Child Naturally"...just one of the titles in Sexual Health Resource Centre library, open six days a week, 533-2959, 51 Queen's Cres. The centre is open year round and run by volunteers. It is open to Queen's members and the community at large, and gives information and referrals in all areas of sexual health. It also sells a variety of non-prescription safer sex products at cost.

## Physical Education Centre

### Building hours to Sept. 3

Monday to Thursday 8 am - 6 pm  
Friday 8 am - 4:30 pm  
Saturday & Sunday CLOSED

- The PEC is closed Monday, Sept. 4.
- The swimming pool will be closed Monday, Aug. 14 to Monday, Sept. 4 for annual maintenance.
- Fall and winter hours resume Tuesday, Sept. 5.

## Surplus items

### The Department of Art offers for sale:

1 Fade-ometer  
Model Number 25-FR  
Manufacturer Atlas Electric Devices Co., Chicago, Ill.  
Application - Used to study the effects of light on materials.  
For information or to view call Pierre du Prey, 36163.

Submit sealed bids marked "Art" to Fran Lanovaz, Purchasing Services by 4 pm on the Monday after this issue. Please mark bids "Confidential".

**Queen's University is not responsible in any way for the condition of any item(s) it has made available, nor for any damage or injury that may occur due to use or removal of the item(s). Queen's University reserves the right to reject any or all of the bids. Only successful bidders will be notified.**

## Volunteers needed

### Asthmatics

The Respiratory Investigation Unit of Queen's University is looking for people with asthma over 10 years of age to participate in clinical trials with new asthma medications. For more on these home-based research studies, please call to see if you qualify. Several visits to Kingston General Hospital are required. Compensation for time and travel will be provided. Supervisor: Dr. Denis O'Donnell (Respirologist). Details: 548-3232; Evelyn ext. 4890 or Kathy, ext. 4950.

## Contraception study

A new low dose oral contraceptive is being evaluated to see if it may achieve more predictable bleeding with fewer side effects than other low-dose birth control pills. Free medication, participation paid. Healthy women, (age 18-50) at risk for pregnancy with regular menstrual cycles call 548-1390 (Dr. Robert Reid and Dr. Mary Anne Jamieson) Kingston General Hospital for details.

## Do you suffer from depression?

Dr. Amarendra Singh, Psychiatry, requires volunteers for two studies. The first is to assess the effects of Wellbutrin®SR versus Paroxetine (Paxil®) on the presence or absence of sexual desire or orgasm, which may occur while being treated with antidepressants. The second is to assess the effects of Reboxetine on patients who have difficulty with socialization and mood fluctuations. Medication will be provided free if you qualify for either study. Contact: Dr. A. Singh, 544-3400, ext 2536.

## Pregnancy and work

The Clinical Mechanics Group at Queen's needs volunteers to participate in a study on back pain in working pregnant women (you don't need back pain to participate). You'll be asked to attend two, hour-long sessions (at approx. 20 and 34 weeks). Contact Judy Tse, 548-2356, email pregnancyandwork@hotmail.com.

## We're back!

The Gazette resumes its regular biweekly publication schedule next month. See you in September!

Fall publication schedule (copy deadlines in brackets):  
Monday, Sept. 11 (Sept. 5)  
Monday, Sept. 25 (Sept. 19)  
Tuesday, Oct. 10 (Oct. 3)  
Monday, Oct. 23 (Oct. 17)  
Monday, Nov. 6 (Oct. 31)  
Monday, Nov. 20 (Nov. 14)  
Monday, Dec. 4 (Nov. 28)  
Monday, Dec. 18 (Dec. 12)

A complete list of fall publication dates and copy deadlines also appears on Queen's Today, at: <http://advancement.queensu.ca/html/queensToday.html>.

## Search for Principal, Queen's Theological College

Queen's Theological College is now seeking applications and nominations for the position of Principal, to begin June 1, 2001, or as soon thereafter as is possible.

Through programs in theology, Queen's Theological College provides a community of teachers and learners dedicated to critical understanding of the Christian faith, and to the preparation of men and women for Christian leadership. Through the Department of Religious Studies at Queen's University, the College provides a community of teachers and learners for knowledge, theoretical understanding and critique of religion - as a global human phenomenon, and in its interaction with other dimensions of human life. The College's theological program is fully accredited by the Association of Theological Schools in the United States and Canada; it is also a Testamur-granting institution of The United Church of Canada. As a graduate degree-granting institution, the College is affiliated with Queen's University.

Within this focus, the Principal is to provide leadership to all involved in the educational process, overseeing the work of the College, its faculty and staff, and providing for a public representation of the College in keeping with its expressed mission, values and goals. The Principal is responsible for the continuing good order and vitality of the

College, and ensures that the College life and work are carried out in accordance with established policies. The Principal is accountable to the Board of Management for overall direction, planning, organization and finances of the College.

In accordance with Canadian Immigration requirements, this advertisement is directed to Canadian citizens and permanent residents of Canada. Candidates internal and external to Queen's Theological College are encouraged to apply. All candidates will receive equal attention. Queen's welcomes diversity in the work place and encourages applications from all qualified women and men, including visible minorities, aboriginal people, persons with disabilities, gay men and lesbians. The appointment of the principal must be approved by The United Church of Canada.

Further details and a position description may be obtained by writing to Anne MacDermaid, Chair, The Search Committee for a Principal of Queen's Theological College, Theological Hall, Kingston, Ontario, K7L 3N6, FAX - 613-533-6879, E-mail - macderma@post.queensu.ca or 3lmp8@post.queensu.ca. Completed applications must include a c.v. and three letters of reference.

The closing date for completed applications or nominations is **Nov. 10, 2000**.

## Calendar

### Art

**The Agnes Etherington Art Centre**, University Avenue.

**Real Life**, works from the art centre collection, to Aug. 20. **Intercept: Contemporary Works**, to Aug. 20. **Landscapes/Escapes: The Group of Seven and their peers**, to Sept. 17. **The Object of Art: European Paintings from the 16th, 17th and 18th Centuries**, to Jan. 20, 2002. **The Human Figure: A Selection from the Justin and Elizabeth Lang Collection of African Art**, to March 11, 2001. **Shift**, Scott Wallis, to Sept. 24. **Building Blocks: Canadian Made** to Sept. 17. **Tear**, Wanda Koop, ongoing. "Have you seen Agnes?" ongoing. <http://www.queensu.ca/ageth/>.

**Union Gallery**, First floor, Stauffer Library. **Mutative Process**, Lynden Beesley and Marilyn King. To Aug. 29.

Upcoming exhibit: **Pop**. Chien-ming Huang, Takeshi Miyazawa, Lance Wei. Sept. 12 - Oct. 3. Reception: Sept. 21, 6 - 8 pm.

### Music

**Saturday, Aug. 19**  
**Queen's 2000**  
**Waterside Summer Series**  
Wolf Tormann, cello, Cynthia Szabo, piano. Romantic pieces by Beethoven and Chopin. St. Alban's, Amherst Island, 7:30 pm. Tickets \$12. Call Jan Sneepe, 634-1255.

### Other

**Kingston Zen Group**  
Sunday morning meditation. All welcome. Details: Malcolm and Sharon, 542-4294; griffin@post.queensu.ca or Brian, 533-7219, 3bjd3@qlink.queensu.ca.