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U of G Receives \$12.5M From OIT

*Nine projects to benefit
from provincial support*

PLANTS GROWING on the U of G campus in special chambers that simulate the atmosphere of space are one step closer to actually making it into orbit one day, thanks to a portion of a \$12.5-million commitment from the Ontario Innovation Trust (OIT).

OIT officials were on campus March 24 to present a cheque to President Mordechai Rozanski for nine research projects that involve close to 200 researchers and span at least 10 departments and three colleges.

A ceremony was held in the tropical greenhouse — not far from the special chambers where the "space plants" grow — to mark the presentation, which was attended by Guelph MPP Brenda Elliott and OIT's executive director, David Bogart.

Among the projects that will benefit from the OIT funding is the "space laboratory" being built near the Bovey Building, where Prof. Mike Dixon, Plant Agriculture, and other researchers hope to learn how to grow food in space by researching atmospheric pressure. The lab will include special chambers that duplicate conditions in space.

The \$8-million facility was initially funded through the Canada Foundation for Innovation (CFI), with OIT's contribution being the final financial commitment. The total estimated value of all Guelph's

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Physics professor Elisabeth Nicol poses in CFRU's studio following a taping for CBC's *Quirks & Quarks*.
PHOTO BY DEAN PALMER/THE SCENARIO

Coming to a Radio Near You

Physics professor shares her expertise with listeners of CBC's Quirks & Quarks

PREPARING FOR her next "appearance," Prof. Elisabeth Nicol, Physics, is reviewing material collected on the desk in her MacNaughton Building office. But those papers aren't lecture notes — they're press releases. And her pending discussion isn't one of her customary physics lectures but another taping session for her nationwide radio audience.

Since last fall, Nicol has been one of several guest columnists on *Quirks & Quarks*, the weekly science program of CBC's Radio One. About 500,000 listeners across Canada tune in to the program each week, which airs at noon Saturdays.

Having taped five programs, Nicol says she still finds it hard to believe she was chosen for a radio gig. "I'm sort of shy and I don't see myself as being good on radio," she says, adding a common disclaimer: "I hate hearing myself."

When the CBC first approached her two years ago, she turned them down. Her name had been floated by a former student, now a science journalist. Ironically, the student had pursued journalism at Nicol's urging. "I suggested to her that a neat alternative would be to be a sci-

ence journalist. We need people trained in science who can communicate to the public."

That conviction was partly what made her change her mind when the station called again last year, looking for a replacement for Harvard University physicist Melissa Franklin. Even then, Nicol only half-expected that she'd actually wind up on the air. "I just assumed I'd do the audition, it would be a disaster and they'd never bother with me again."

No such luck. "We're looking for people who are not only knowledgeable but also have a good ability to communicate clearly and give not just the story but a perspective on the story," says the show's host, Bob McDonald, who regularly chats with five columnists for *Quirks & Quarks*.

"She's effervescent, she has a sense of humour — she's not afraid to leave the science jargon behind," says McDonald. Pointing out that he has yet to meet Nicol in person, he expresses surprise at her self-deprecation. "She's not shy with me on-air."

The show follows an interview format taped over the phone between McDonald at CBC Radio's

Toronto studio and Nicol, who occupies a booth at the campus radio station, CFRU, in the University Centre.

For each show, producer Jim Lebas usually asks her to choose a topic from among a list of suggestions. She has discussed gravity, friction and superconductors (her research specialty is high-temperature superconductors), ball lightning and last year's Nobel Prizes in chemistry and physics. Occasionally, she suggests the topic, such as last month's show on "left-handed" materials, a subject she heard discussed at a recent conference of the American Physical Society.

Nicol's preparation for the show normally includes research at the library and on the Internet and discussion with fellow researchers at U of G and further afield. "It's a bit like an oral exam."

Apart from a "crib sheet" of facts or statistics, she generally goes without notes. She discusses the topic ahead of time with the producer, but she and McDonald don't prepare standard questions and answers. "They want a spontaneous style," she says.

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Budget Goes to Senate, B of G

Funding levels won't be known until after Nov. 1

U of G's 2000/2001 preliminary Ministry of Training, Colleges and Universities (MTCU) budget was reviewed by Senate and the finance committee of Board of Governors April 11 and will go to the full board April 25.

The lateness of this year's provincial funding announcement has had University administrators working against the clock to prepare a budget in time for students to comment on it before the semester ends, says Nancy Sullivan, vice-president (finance and administration). In addition to the time constraints, administrators have been working under a cloud of uncertainty, she says. "In all my years of working in the Ontario university system, I have never seen a budget announcement that involves so much uncertainty."

The uncertainty stems from the government's decision to increase grant funding in the form of two targeted funding envelopes — a performance fund and an accessibility fund — instead of general base increases to the operating grant. The \$16.5-million performance fund, representing a one-per-cent increase to the entire university system, is being distributed based on three key performance indicators: graduation rates, job placement rates within six months of graduation and job placement rates within two years of graduation. The \$16.5-million accessibility envelope is providing another system-wide one-per-cent increase, but will be distributed only to those universities that in 2000/2001 can match or exceed their actual intake of first-year students in 1999/2000.

"Because of the conditions imposed by these targeted envelopes, Ontario universities won't know until after Nov. 1 — halfway through our fiscal year — what level of funding they'll be receiving from MTCU," says Sullivan. "This is forcing U of G and other universities to build their budgets on the basis of projections about what might or might not be."

Continued on page 4

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Microbiologist Receives MRC Senior Scientist Award

Five-year award designed to allow recipient to focus on research issues

PROF. CHRIS WHITFIELD, Microbiology, has been chosen to receive one of 15 Senior Scientist Awards given to Canadian researchers this year by the Medical Research Council (MRC).

Not only is this the first time a Guelph faculty member has received an MRC Senior Scientist Award, but it is also the first such award given to a researcher at a Canadian university without a medical school, according to a spokesperson for the granting council.

"This is a highly prestigious five-year award designed to allow the recipient to focus on research issues," says Prof. Anthony Clarke, chair of the Department of Microbiology. The award is worth \$350,000 (plus benefits) over five years.

It will provide release time to permit Whitfield to concentrate on research and graduate teaching in his program, investigating disease-causing bacteria.

"I was excited and flattered," says the Guelph microbiologist, whose studies here since 1984 have been funded by both the MRC and the Natural Sciences and Engineering Research Council. (Last spring, he received a five-year operating grant worth a total of \$400,351 from MRC. See accompanying list of this year's grants to Guelph researchers.)

"MRC salary award recipients are selected by a multidisciplinary committee, and it's always nice to have your efforts appreciated in a scientific forum extending beyond your own discipline," says Whitfield, a former chair of MRC's grant review committee in microbiology and infectious diseases. "There are not many such awards in the country, and there are not many microbiologists that hold them."

His new award is one of 11 announced recently by the MRC under its 1999 competition for the biomedical category. Four other awards were provided under the granting

council's health research category. (In the MRC's scholar category, one of this year's 44 awards went to University of Western Ontario microbiologist David Heinrichs, who held a post-doctoral position in Whitfield's lab until a year ago.)

Whitfield studies enzymes involved in making polymers on cell surfaces of such bacteria as *Klebsiella pneumoniae* (which causes pneumonia and urinary-tract infections, particularly among hospital patients), *Salmonella* (food-borne illnesses) and *Escherichia coli* (various infections). These bacteria are successful pathogens because of their ability to evade or outwit the host's defences in humans or livestock.

Studying polymer assembly mechanisms will provide clues about how bacteria interact with host cells and respond to host defences. "I'm interested in how bacterial cell membranes and surfaces are put together and how their structure and organization might change in the course of infection," he says.

Explaining that his work begins with a fundamental understanding of underlying molecular processes, Whitfield says it can lead to valuable information for vaccine development or for identifying new antimicrobial drug targets.

"Pretty much everything we do is basic science. The applied aspects arise from that foundation. For example, we've got long-term goals in terms of novel drug targets and some elements we hope to transfer soon to the pharmaceutical sector. But developing drug targets is a long, laborious process."

Whitfield says the new award will allow him to spend relatively more time on his research program and with his graduate students and post-doctoral fellows. His research currently involves six graduate students, three post-docs, a technician and several undergraduates.

During the next five years, he anticipates pursuing new research projects involving the same kinds of cell surface molecules. For example, bacteria accumulating as bio-films in a medical setting may be inherently resistant to antimicrobial therapy and cause persistent infections. These bio-films also cause significant bio-fouling and contamination in water and waste-water pipelines.

He also envisions expanding his international collaborative projects and pursuing more partnerships with other researchers in the Canadian Bacterial Diseases Network.

BY ANDREW VOWLES

MRC Grants to Four

FOUR U OF G researchers were recently awarded operating research grants from the Medical Research Council, beginning spring 2000.

Prof. Inanankur Bag, Molecular Biology and Genetics, received \$179,340 (three-year grant) for his work on the "Regulation of the Poly(A)-Binding Protein Gene Expression in Mammalian Cells."

Prof. Dev Mangroo, Chemistry and Biochemistry, was awarded

\$307,631 (three-year grant) to study the "Function and Mechanism of Nuclear t-RNA Export Receptors."

Prof. Rodney Merrill, Chemistry and Biochemistry, was awarded \$8,395 (two-year grant) for the project "Structure and Function of *P. aeruginosa* Exotoxin A."

Prof. Barbara Morrongiello, Psychology, received \$206,361 (three-year grant) to study "Unintentional Childhood Injuries: Influences on Children's Risk-Taking Behaviour."

IN MEMORIAM

Associate registrar Bob Auger died March 28 at home after a long illness. He joined the University in 1982 as associate registrar (systems) and was associate registrar (enrolment, statistics and systems) at the time of his illness. He was a past executive member of the Professional Staff Association and is survived by his wife, Susanne; two children, Catherine Cameron and Rob;

and one grandchild, Skya. A tree will be planted in his memory Sept. 24 at 2:30 p.m. in the Wall-Custance Memorial Forest at the Arboretum.

A memorial service for Prof. Gerald Rubio, School of Literatures and Performance Studies in English, who died Jan. 25, will be held April 30 at 2 p.m. at the Arboretum Cen-

tre. Prof. Rubio joined U of G in 1967 and taught in the Department of English for many years.

U of G honorary degree recipient William Hamilton, considered the most influential evolutionary biologist of his generation, died last month in Britain at the age of 63. He was awarded a doctor of science degree by Guelph in 1994.



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TREES TO BE REMOVED

Grounds staff will remove seven dead or dying trees on campus this spring, says Grounds head John Reinhart. The trees include a sugar maple at the southeast corner of Macdonald Hall and a silver fir at the northwest corner of War Memorial Hall. Five dead spruce trees — three at the College Avenue crosswalk, one at the southeast corner of College and Gordon and one west of parking lot 44 — will also be removed. Reinhart says a general spruce decline has been noted across the province, but the cause has not been determined.

INPUT SOUGHT ON POSSIBLE MERGER OF CBS, CPES

At the request of the president and provost, a task group has been established to gather information about the possible merger of the College of Biological Science and the College of Physical and Engineering Science. The task group has established a Web site that discusses issues surrounding a merger and includes a questionnaire to obtain input from the University community. The job of the task group is to determine the wishes of all interested parties in both colleges and to produce a report describing the results of the investigation, which will be submitted to the provost. The Web site is located at <http://hebb.cis.uoguelph.ca/~deb/Merger/>.

U OF G TO HOST SPRING CLASSICS CONFERENCE

U of G's classics program plays host to the spring conference of the Ontario Classics Association April 29 in room 114 of the MacKinnon Building. This year's theme is "The Great Games of Greece." Guest speakers are Robert Weir of the University of Western Ontario discussing "Athletes and Musicians at the Pythian Games," Mark Golden of the University of Winnipeg on "Olive-Tinted Spectacles: Myths in the Ancient and Modern History of the Olympics" and Gerry Schaus of Wilfrid Laurier University on "The Greek Stadium at Nemea: If You Build It, They Will Come." Cost of the conference, which is open to the public, is \$20 general, \$12 for students, and includes lunch. Register by April 17 with Prof. Victor Matthews, Languages and Literatures, at vjmatthe@uoguelph.ca or call Ext. 3152/3883.

(GWC)² HOLDS ANNUAL MEETING, SEMINAR

The Guelph-Waterloo Centre for Graduate Work in Chemistry and Biochemistry will hold its annual meeting, seminar, poster session and awards presentation April 28 at the University of Waterloo. The meeting for (GWC)² members begins at 1 p.m. in Room 1302 of the Davis Centre, to be followed at 3 p.m. by a public seminar with Prof. Nigel Bunce, Chemistry and Biochemistry, discussing "Dances With Dioxins." For more details, call Andrea Wetmore at Ext. 3848.

OIT Support to Boost Research

Continued from page 1

Guelph MPP Brenda Elliott and David Bogart, executive director of the Ontario Innovation Trust, second from right, came to campus March 24 to present a cheque to U of G. At right is Prof. Mike Dixon, Plant Agriculture. At left is Richard Worsfold, director of business development for CRESTech, an industry partner.

PHOTO BY MARTIN SCHWALBE

CFI/OIT-funded projects is more than \$30 million.

"The opportunities afforded U of G researchers by the combined CFI and OIT infrastructure awards are unprecedented in recent times," said Dixon. "U of G has been extraordinarily successful in this very competitive arena for research infrastructure funding. This reflects very well on the quality of our faculty and research personnel."

Additional funding for the projects has come from institutional and private-sector partners. Some of the projects have been in the works, gathering initial funding commitments, for close to 18 months.

"Our support for these projects will ensure that the University of Guelph is getting a major boost for its research infrastructure," said Bogart. "The University will be able to develop substantially enhanced research capabilities in areas such as food systems biotechnology, animal health and biotechnology, molecular biology, carbohydrate chemistry and food safety."

Reflecting on U of G's success in the OIT program, Rozanski noted that researchers across a range of disciplines will benefit from more than \$60 million in funding from the OIT, CFI, Ontario Research and Development Challenge Fund and Guelph's partners in industry.

"Taken together with the \$73.6 million in SuperBuild Growth Fund support for new facilities for the University of Guelph, these investments reflect the world-class nature of our research and researchers and will permit us to contribute to the advancement of knowledge to the benefit of our society," he said.

Each of the OIT awards will have the potential to provide benefits for the broader public in Ontario, as well as the University and its various partners. The projects are:

- \$3.15 million to help build the "space lab" to research biological

systems for terrestrial and space applications, in conjunction with the European Space Agency and NASA;

- \$2.99 million for the creation of the Canadian Research Institute for Food Safety, which will enhance the ability of industry to produce safe and affordable high-quality foods;
- \$2.8 million for research at the Centre for Food and Soft Materials Science, which will contribute to improved quality, added value and reduced costs for the food-processing industry;
- \$1 million for new equipment at the Centre for Animal Technology and Health's Genome Manipulation Laboratory, which will help lead to improving the feed efficiency of animals;
- \$1.6 million to support research and training at the Agricultural Plant Biotechnology Centre, which will support job creation in the private sector by developing unique plant products for food and beverage manufacturers;
- \$287,697 for a mass spectrometer to identify proteins, which will boost the analytical capability of the University and provide training for the local biotech industry;
- \$154,684 for equipment to be

used in research that has the potential to convert biomass to useful feedstocks for large-scale industrial application in Ontario;

- \$390,927 for research in plant and animal pathogens and food science, which will contribute to a better understanding of the relationship between the structure and function of food-related molecules, and will enhance the ability to check food safety; and
- \$156,700 for mobile analytical equipment for monitoring trends and events in crop areas, which could help create spin-off companies and increase agricultural production through environmental management.

The CFI was established by the federal government in 1997 to strengthen the capacity for innovation in Canadian universities and research institutions. The foundation contributes 40 per cent towards eligible project costs, with universities identifying the remaining 60-per cent matching funds.

The OIT, created in March 1999, has a mandate to assist the province's colleges, universities, hospitals and other non-profit organizations carry out scientific research and technology development by enhancing the infrastructure needed for research.

Male Suspect Charged In Assaults, Break-Ins

A MALE SUSPECT has been charged with several offences related to the two sexual assaults and a series of break-ins that have occurred in Guelph over the past year. The charges are the result of information received from the public and the work of a special task force.

The task force, which is still investigating incidents that occurred on Clive Avenue and Metcalfe Street in Guelph, urges members of the community to continue to be mindful of their home and personal security at all times. The suspect has been in custody since Feb. 28 on a number of unrelated matters.

PEOPLE

LANDSCAPE ARCHITECT HEADS NATIONAL SOCIETY

Prof. Cecelia Paine, Landscape Architecture, became the new president of the Canadian Society of Landscape Architects (CSLA) during its winter executive meeting in Winnipeg in February. The CSLA is the national professional association representing 1,700 landscape architects across Canada.

COLLEGE ROYAL HONOURS STAFF MEMBER FOR VOLUNTEER CONTRIBUTION

Tim Gaw of Grounds is this year's winner of College Royal's Jim and Joe Award, which recognizes volunteer contributions to the annual student-run event by a U of G faculty or staff member. Gaw was recognized in particular for his volunteer work in organizing and participating in the Santa Claus parade. The award, which is named for its first recipients, Profs. Jim Atkinson and Joe Prokipcak, was presented to Gaw at the annual College Royal luncheon during open house weekend.

CUMMINGS GIVES KEYNOTE ADDRESS IN WASHINGTON

Prof. Harry Cummings of the School of Rural Planning and Development and the Department of Agricultural Economics and Business presented the keynote address at the U.S. Department of Veteran Affairs, Health Services Research and Development annual meeting in Washington, D.C. He spoke on "Integrating Evaluation Into Quality Assurance Programs for the Health Professions in Ontario."

ARTIST EXHIBITS WORKS IN FLORIDA, JAPAN, ENGLAND

Prof. Jean Maddison, Fine Art and Music, attended the 28th annual Southern Graphics Council Conference in Florida and exhibited works in the open portfolio show. Three works chosen by an international committee were on display in Sapporo, Japan, at the International Print Biennale for the month of March, and Maddison is now mounting an exhibition of work titled "Genetic Code III" for the Contemporary Print Show 2000 at the Barbican Centre in London, England.

HISTORIANS PARTICIPATE IN LOCAL LECTURE SERIES

Three members of the Department of History were guest lecturers in the Wellington County continuing education archeology/history lecture series this winter. Prof. Elizabeth Ewan spoke on "Whatever Ales Ye: Women and Brewing in Medieval Scotland." University professor emeritus Gil Stelter explained "Jerusalem: What is the Appeal of the Eternal City?" PhD candidate Scott Moir presented "The Devil's Children: Witches in 17th-Century Scotland." Moir also gave a talk on "Supernatural Scotland" at the Guelph Civic Museum's Robbie Burns Day celebrations.

Town Hall Meetings Outline Budget Goals

Continued from page 1

Unlike the operating grant announcement, which was for only one year, the provincial tuition announcement applies for five years. In each of those years, tuition can increase by two per cent above the maximum allowable. Because Guelph has not increased fees to the maximum allowable in the past few years (and has forgone at least \$3 million in revenue as a result), it could increase undergraduate tuition by about four per cent this year (to bring it up to the maximum allowable), and could increase graduate tuition almost 25 per cent. As in the past, 30 per cent of any revenues from undergraduate fee increases must be designated for needs-based student aid.

At campus town hall meetings March 30 and April 5, John Miles, assistant vice-president (finance), outlined for members of the University community the multi-year budget goals and basic assumptions on which U of G's 2000/2001 budget is based. The budget goals are fourfold: to invest in the University's quality and to enhance accessibility (teaching costs such as GTAs and sessionals, teaching/learning facilities, student aid); to attain a balanced budget through deficit repayment; to reduce the structural (base) deficit so that the University can reduce its reliance on one-time solutions; and, finally, to create a stabilization fund to counter the effects of the uncertainty in government funding.

"As the government continues to target funding and increases uncertainties in annual grants, it affects our ability to predict a major source of our annual revenues — provincial grants," said Miles. "We need to develop a cushion to reduce the risk of mid-year budget reductions."

In recent years, as government funding has declined, the University has started each budget process with a base deficit, a shortfall in revenues compared with expenses. In the past, this has been covered with one-time adjustments, including a pension contribution holiday and year-end savings. This year, U of G started the budget process with an opening base deficit of \$6.58 million. Opening base revenues and recoveries — provincial grants, tuition, cost recoveries and other sources such as the University's contract with the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) — total \$181.3 million. Expenses total \$187.9 million. The bulk of this — \$142.3 million — is personnel costs; the remainder involves library acquisitions, student aid, operating expenses and the annual repayment of the deficit related to the University's special early retirement plan.

In an initial 2000/2001 budget drafted before the provincial funding announcement (see Chart 1), U of G identified three additional deficit items — an anticipated reduction of \$450,000 in OMAFRA support (the impact on the MTCU budget of a \$3.5-million cut announced to the contract itself), a provision of \$4.5 million for salaries and benefits (this is subject to negotiation, and only three of 10 U of G employees groups have finalized agreements to date) and \$500,000 in additional utility costs due to recent increases in oil and gas prices. The budget also identified \$900,000 in resignation and retirement cost savings as senior faculty and staff leave the University and their positions are filled at lower salaries. This brought the pre-announcement planning deficit to \$11.13 million.

Recognizing that it is of paramount importance to invest in the University's quality and enhance accessibility, U of G is planning to invest \$3.27 million in a number of specific academic and student support areas, said Miles. This funding (see Chart 2) is targeted towards library acquisitions, teaching costs to stabilize

enrolment, the Research Initiative Fund (targeted specifically at humanities and social sciences, where it is increasingly difficult to secure external research grants), support for distance education courses, start-up funds for new faculty, student financial aid (in addition to the amount mandated by the government), student and registrarial services (including learning support and career services) and classroom upgrades.

These investments in quality and accessibility, added to the \$11.13 million already identified, bring the University's total budget planning deficit to \$14.4 million.

SOLUTIONS

As in past years, U of G proposes to turn to a one-time pension contribution holiday of \$5.1 million as part of the solution to the budget deficit, said Miles. These funds are savings realized in the operating budget, not withdrawals from the pension plans. This saving is conditional on the performance of the pension plans and cannot be confirmed until later in the fiscal year. In addition, U of G's ancillary parking operation will contribute \$100,000 from its net income, and president Mordechai Rozanski has sought a contribution of \$500,000 from the Heritage Fund for start-up funds for laboratories and research equipment for new faculty. This is vital because of the growing competition among universities across North America in filling faculty positions, said Miles.

Guelph will also realize additional revenues of \$3.35 million in 2000/2001 due to incremental undergraduate enrolment from previous years' intakes (\$3.2 million) plus projected incremental graduate enrolment growth in 2000/2001 (\$150,000).

In face of the uncertainty surrounding the provincial funding announcement, U of G can only estimate what level of support it will receive, said Miles. The University is estimating that its share of the provincial funding envelopes will be \$1.4 million on the basis of the three performance indicators and \$1 million on the basis of enrolment.

Parallel to the development of the 2000/2001 budget, the Enrolment Management Committee (EMC) has been exploring U of G's options surrounding tuition and enrolment to guide the budget process. EMC chair Prof. Alastair Summerlee, associate vice-president (academic), told the town hall meetings that the committee has developed its guidelines within the framework of three primary goals: enhancing accessibility to the institution, maintaining quality and reducing the structural deficit.

In terms of tuition, EMC is recommending just over a four-per-cent increase in undergraduate tuition and a one-per-cent increase in graduate tuition. The latter recommendation recognizes that U of G's graduate tuition is already one of the highest in the country and that increases in the number of graduate students are planned.

Although a number of other universities are considering additional fee differentiation as a means of dealing with underfunding, EMC has reaffirmed that the University will not differentiate tuition fees this year above what is already in place, he said.

EMC also recommends maintaining 2000/2001 undergraduate enrolment at the level of fall 1999 actuals, increasing graduate enrolment slightly (about 45 students) and providing additional support for teaching and learning, including more funding for graduate students through teaching and research assistantships.

Based on EMC's tuition recommendations, U of G will realize an additional \$2 million in

CHART 1

Initial 2000/2001 MTCU Budget Pre-Announcement Position:

	\$millions
■ Opening Base deficit	(6.580)
■ OMAFRA transfer reduction	(0.450)
■ Provision for salaries and benefits	(4.500)
■ Estimated utilities	(0.500)
	(12.030)
■ Resignation and retirement savings	0.900
■ Sub total before investments and solutions	(11.130)

CHART 2

Initial 2000/2001 MTCU Budget PROPOSALS: Investments: quality and accessibility

■ Total Before Investments and Solutions:	(11.130)
• Library acquisitions	(0.350)
• Teaching Costs: stabilize enrolment	(0.870)
• Research Initiative Fund	(0.100)
• Distance Education increased courses	(0.100)
• Start-up funds for new faculty	(0.500)
• Student financial assistance (30% plus \$0.100M)	(0.700)
• Student and Registrarial Services:	(0.350)
>incl. learning support, career services	
• Classroom upgrades	(0.300)
• TOTAL Investments	(3.270)
■ Total After investments, before solutions	(14.400)

CHART 3

Initial 2000/2001 MTCU Budget PROPOSALS: SOLUTIONS:

	\$m
■ Total After Investments, before solutions	(14.400)
■ Solutions Before Tuition:	
■ Grants: Performance based:	1.400
■ Grants: Enrolment based:	1.000
■ Incremental enrolment (based on 1999):	3.350
■ PCH	5.100
■ Ancillary -Parking	0.100
■ Heritage Fund Contribution:	0.500
■ Total Solutions Before Tuition:	11.450
■ Tuition (total, before aid removed)	2.000
■ Total Solutions	13.450
■ Total remaining (unallocated savings)	(0.950)

tuition, including the 30-per-cent set-aside for student aid. All sources of financial aid will increase the allocation to more than \$11 million for student aid in 2000/2001.

Miles reported that the identified solution totals \$13.45 million, leaving a "gap" of \$950,000 (see Chart 3), which Rozanski will present to B of G. Miles said he is fairly confident the "gap" can be filled by one-time year-

end savings or by exceeding enrolment targets, but this cannot be confirmed until July, when the 1999/2000 fiscal year-end results are finalized.

The full text of the budget, along with recommendations from EMC and the Student Budget Advisory Group, is available on the Web and can be accessed through the "News" section on the University's home page.

The L.M. Montgomery Circle Widens

New library gift expands knowledge of Montgomery and Canadian publishing

SITTING in the McLaughlin Library archives recently, I opened one of L.M. Montgomery's books and found a letter tucked inside that was written in her own hand and seemed to be addressed to me.

"To my friend, greetings," she began. "For you are my friend, are you not, whoever you may be to whom this letter is intended?"

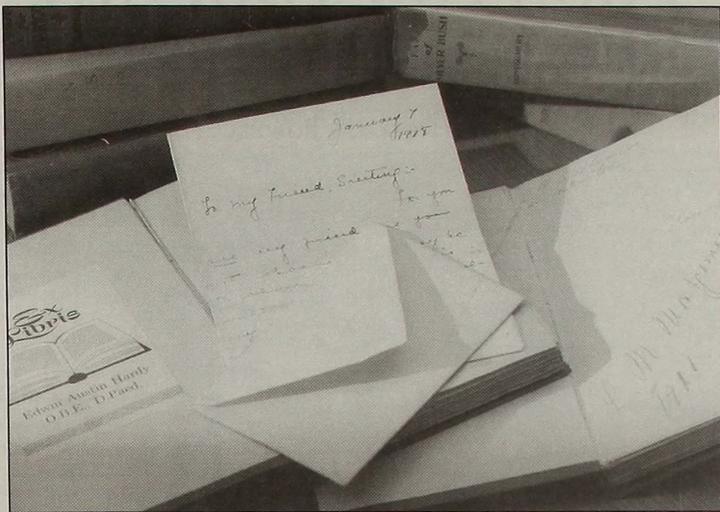
There is more in the letter and much more to learn from the gift that brought it to the University of Guelph.

The four-page note was hidden in one of 18 Montgomery books — most first or early editions — that are the central feature of a gift of more than 150 publications from Mary Harvey of Brampton. They came from the personal collection of her grandfather Edwin Hardy, who was a contemporary of Montgomery's and an important supporter of Canadian poets and writers. Like Montgomery, Hardy held the Order of the British Empire, but he was a collector of books rather than an author. Head of English at Jarvis Collegiate in Toronto, he also founded the Ontario Library Association and was national secretary of the Canadian Authors' Association, among many other roles he played in Ontario's education and library sectors.

Harvey says her grandfather's library once contained as many as 6,000 books, accumulated through his connections in the authors' association and the World Federation of Education. Some were dispersed shortly after his death, but the smaller collection of several hundred books of Canadian poetry was kept in the family and passed on to Harvey.

She says she contacted the U of G Library because of its extensive Montgomery archives and because she wanted to preserve her grandfather's books for future study. And of course, there's a strong family connection to Guelph. Harvey's husband, John, earned a BSA here in 1948 and an M.Sc. in 1950, and their son Peter graduated with a B.Sc. in 1978. Her brothers, Robert and Allan McConney, are also Guelph graduates, as are several nieces and nephews.

After completing a PhD in the United States, John Harvey taught at



This letter from L.M. Montgomery was tucked into a poetry book recently donated to U of G.

PHOTO BY MARTIN SCHWALBE

OAC for a few years before moving into industry, and Mary Harvey herself taught physical education at Macdonald Institute for about a year during her husband's graduate studies.

Bernard Katz, U of G's head of special collections and library development, says the Harvey gift included several books of fiction and a large number of poetry volumes to add to the U of G Library's already extensive collection of Canadian literature. But there's no doubt, he says, that the 18 Montgomery books are the most important in terms of rarity and their value in expanding our knowledge of Canadian publishing in the early 20th century.

Sixteen of the books are signed by Montgomery, and there are three copies of *The Watchman*, her only book of poetry. There was only one Canadian edition of *The Watchman*, printed in 1916, yet these books show two different bindings, and one copy has a rare dust jacket, which itself is different from a fourth copy of the book that was already part of the U of G collection.

Why the differences? Although Montgomery was an established novelist by 1916, Katz speculates that her publisher at the time, McClelland,

Goodchild and Stewart, may have been unsure about the selling power of her poetry. The Harvey gift provides evidence in the fact that *The Watchman* is priced at \$1 on the dust jacket, whereas a 1923 edition of *Emily of New Moon* sold for \$2. "It's likely that the four poetry books were all printed at the same time, but were

"If you were not my friend, knowing me and liking me a little through my books, you would not care to make your heart glad."

bound months or even years apart as new orders came in," says Katz. "The dust jackets vary in colour and carry different ads for other books published by McClelland."

These discrepancies give scholars a new reason to pore over Guelph's holdings of Montgomery's journals and papers — she kept detailed records of her business affairs — and the publisher's archival records, which are housed at McMaster University. That university was also a

beneficiary of Mary Harvey's generosity, adding several of her grandfather's books to its already extensive Canadiana collection.

Montgomery was living in Leaskdale and then Norval, Ont., when she signed the books found in Hardy's collection, most in 1921 and 1931. Prof. Mary Rubio, Literatures and Performance Studies in English, says Montgomery maintained strong ties with the Toronto literati and journalists.

"She often went down to Toronto to attend book fairs and social events until after the war ended and she became too harassed by family duties," says Rubio, who is currently writing an official biography of the famous novelist. "Whenever she spoke in Toronto, Montgomery drew huge crowds of hundreds of people because she was so well known and beloved as a writer, as well as such an entertaining public speaker."

Rubio says Hardy's books may have been signed at a book fair or given to him by Montgomery as a gift. "He was often an organizer of literary gatherings and knew absolutely everyone on a fairly intimate basis," she says. "He was a much-respected literary figure and teacher, and people gave him their new

books, hoping he would read them and promote them if he thought they were good."

Harvey says her grandfather never learned to drive, so after she turned 16, she chauffeured him to many literary and art events in Toronto. On one occasion, she drove him to Montgomery's Toronto home for a visit, and that's when she met the author whose autographed books filled the shelves of her own home. "I grew up reading from a complete set of Montgomery's novels," says Harvey. "Relationships were much more formal in those days," she adds, "but I think my grandfather and Montgomery were friends, although he would never have called her by her first name."

The letter I think of as my own is dated Jan. 7, 1918, but it was found tucked inside a copy of *The Watchman* that Montgomery signed in 1921. Harvey didn't know the letter existed until Katz first found it in the book, but says it was quite common for her grandfather to stuff his books with letters, notes and clippings about the authors.

The tone of the little letter is almost whimsical, but it also reveals Montgomery's awareness of her own popularity: "If you were not my friend, knowing me and liking me a little through my books, you would not care to make your heart glad." How do we know it wasn't written for me or some other distant fan of Montgomery's *Anne of Green Gables* series?

I like to think the author was awed by the popularity of her novels and inspired to write this note as if it were a note to all her readers, then tucked it inside a volume sitting somewhere on a Toronto bookstore shelf. Katz, however, thinks the note was probably written as part of a publisher's promotion, and Rubio agrees. Montgomery was an active participant in the promotion of her books, and the note would have been a playful little bonus hidden in one of the books the author donated as a book fair prize.

We may never know Montgomery's motives, but for now, it's the only known letter of its kind and one that is certain to spark the curiosity of scholars and readers alike.

BY MARY DICKIESON

Getting a Grip on Bacteria

New technology detects and types toxin-producing bacteria

NEW ADVANCES in rapid detection and typing of toxin-producing bacteria are on the horizon at Laboratory Services, U of G and Health Canada have signed an agreement with Third Wave Technologies of Madison, Wis., to use the firm's patented platform technologies for improving ways to find and identify Shiga toxin-producing *E. coli* (STEC) bacteria.

There are more than 100 types of

STEC bacteria. Infection of humans by these micro-organisms can cause a variety of symptoms, including diarrhea, kidney failure and, in severe cases, death. The 0157:H7 *E. coli* is the most commonly reported — it's the culprit known to cause "hamburger disease." In recent years, outbreaks of 0157:H7 infection have been linked to contaminated meats, non-pasteurized apple juice and alfalfa sprouts in Canada, the United

States and Japan.

Various methods are available for detecting these potentially deadly bacteria in food, but none can simultaneously detect and type STEC bacteria. If bacteria are found, they must be isolated in an expensive pure culture to determine their type, a process that can take weeks.

That's where the collaborative research of Health Canada, Lab Services and Third Wave differs. It will

enhance a current Lab Services fluorescent detection technology by allowing it to simultaneously detect and type different kinds of STEC bacteria without using pure culture. This improved method should take only 36 hours.

"With Third Wave's platform technologies, we believe we can provide faster, less expensive and more accurate detection and typing of STEC bacteria," says Shu Chen,

new-technology development leader at U of G's Molecular Supercentre.

Chen says the new technology will help to rapidly minimize the transmission of these bacteria through the food chain and identify the sources of contamination. "We believe this new method will be important for food testing and also for screening other sample sources," she says.

BY CAROL PILLEY
OFFICE OF RESEARCH

FOOD FOR THOUGHT

“Conventional foods are rarely subjected to the extensive testing and evaluation GM foods must undergo”

By DOUGLAS POWELL

A RECENT ARTICLE on the Council of Canadians Web site called “Food Safety of GM Crops in Canada: Toxicity and Allergenicity” (Clark, 2000) levels criticism at the handling of genetically engineered (GE) foods by Canada’s food regulatory system (the article can be viewed at www.canadians.org/ge-alert/).

The primary charge was that toxicity was not actually tested or measured on 70 per cent of the 42 GE crops approved in Canada and that allergenicity was not assessed through lab or feeding trial measurements on any of the 42 GE crops. But rather than provide references to the decade-long scientific discussion of potential allergenicity and toxicity from GE foods (OECD, 1998; OECD, 1993; WHO, 1991), the paper’s authors repeatedly state that any explanation is “the usual heuristic reasoning.” The only references in the article entail simple examinations of the Health Canada and Canadian Food Inspection Agency Web sites.

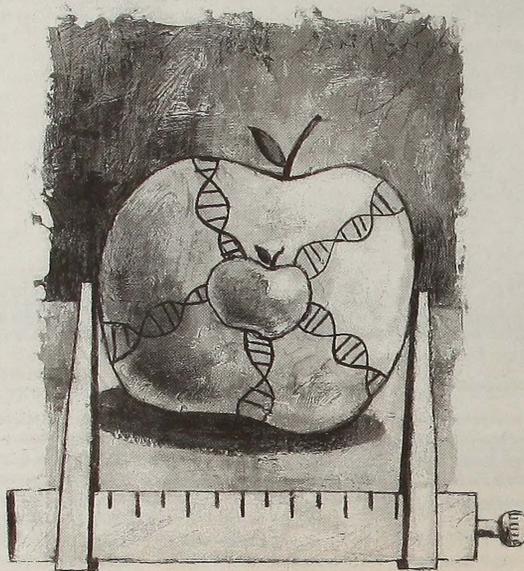
In a Jan. 21 news release, Health Canada stated that the authors based their conclusions “on the information contained in decision summaries posted on Health Canada’s Web site,” which are intended only to provide the public with general information on products that have undergone a safety assessment according to the criteria published in Health Canada’s guidelines for the safety assessment of novel foods. Because the authors did not review those guidelines, the conclusions “are misinformed as they disregard the entire approach to food safety assessment.” (The complete Health Canada response can be found at http://www.hc-sc.gc.ca/80/foodalimnt/english/subjects/novel_foods_and_ingredient/health_canada_response_gmo.html.)

In Canada, all novel foods, including genetically modified (GM) foods, whether derived through genetic engineering, mutagenesis breeding or other techniques, must be evaluated by Health Canada for food safety before they can enter the food system. The basis of novel food-safety assessments by Health Canada scientists is a comparison of each novel food with a conventional counterpart and requires a critical evaluation of information provided in accordance with the guidelines for the safety assessment of novel foods (Health Canada, 1994). For GM foods, this includes a description of the food product; detailed information about its proposed use; molecular, biochemical, toxicological, nutritional and allergenicity data; an estimate of dietary exposure; and anticipated use patterns by the average consumer and by population subgroups (McIntyre, 1998). This process is generally referred to as the establishment of substantial equivalence.

Claims that substantial equivalence necessarily means GE foods are assessed only on the basis of their chemical composition is a fallacy. In addition to demonstrating a history of safe use and/or a relation with endogenous food proteins, GE plant products are normally subjected to compositional comparison with non-GE counterparts as well as feeding trials. These trials, or acute toxicity studies with laboratory animals, normally use either transgenic plant products in the feed formulation or high concentrations of transgenic protein purified from a bacterial or plant source.

Livestock feeding studies using insect-resistant corn (Brake and Vlachos, 1998) and cottonseed (Berberich et al, 1996; Fuchs et al, 1993) or herbicide-resistant soybean (Hammond et al, 1996; Padgett et al, 1995) have not shown significant differences in nutritional composition or wholesomeness when compared with feeds containing non-transgenic components.

The application of standard toxicological methodologies as an analytical method for detecting safety concerns ascribed to GE foods is limited by a number of factors, including the animal model, its dietary preferences and the levels of other nutritional and anti-nutritional factors that naturally occur in the food. Even subjects eating unmodified foods can display abnormalities because essential nutrients can be toxic at high enough lev-



els. MacKenzie (1999) reports a study conducted by Harry Kuiper of the State Institute for Quality Control of Agricultural Products in Wageningen, Netherlands. A GE tomato was freeze-dried and fed to rats at a rate equivalent to consumption of 13 fresh tomatoes a day. Kuiper was unable to determine the toxic threshold for the GE protein in the tomato because the rats’ diet contained the maximum amount of tomato that could be fed without the animals being poisoned by basic nutrients, such as potassium, in the tomato powder.

Nevertheless, toxicological screening remains a useful tool in food-safety evaluations when it is used to assess purified transgenic proteins. For example, as part of the safety assessment for Colorado potato beetle-resistant potatoes, high doses of purified cryIIIA protein (5000 mg/kg body weight) were administered to lab mice. Based on the average human consumption of potatoes and the level of expression of the cryIIIA protein in transgenic tubers, this dosage represented a 2.5-million-fold safety factor. Adverse effects were not observed in the test animals, nor were there any effects on food consumption, weight gain or gross pathology (Lavrik et al, 1995).

The attempt to improve any food can possibly lead to unexpected consequences. That’s why safety regulations and assessments are designed to minimize such risks. In one instance in a lab, for example, a human allergen was transferred from one crop to another. During the preliminary assessment process, the company immediately discontinued the experiment.

The approach used by Health Canada and other international regulatory authorities to assess allergenicity is thoroughly documented in the publication *Allergenicity of Foods Produced by Genetic Modification* (IFIC and ILS, 1996) and involves a comparison of characteristics associated with proteins that are known food allergens. These include molecular weight, resistance to digestion and heat and other conditions encountered during food processing, amount present in the final food and amino acid sequence homology with known allergens. Food allergenicity experts have repeatedly stated that animal models could not be used because none exist that reliably predict human response to proteins of unknown allergenic potential.

More fundamental, however, is that conventional foods, with very rare exceptions, are not subjected to the extensive testing and evaluation that GM foods must undergo in Canada. Therefore, the use of substantial equivalence in assessing novel foods provides a scientifically critical and defensible measure for food-safety evaluation that is additional to other regulations

for so-called traditional foods. The methods by which GM food safety are assessed continue to be scrutinized, and scientists from the 29 industrialized countries of the Organization for Economic Co-Operation and Development are working to develop a more rigorous system for the evaluation of GE food — and indeed any food — for future use.

A more complete overview of substantial equivalence, with references, including dissenting scientific articles such as Millstone et al, 1999 can be found at www.plant.uoguelph.ca/riskcomm/plant-ag/se-response.htm.

Prof. Douglas Powell is a faculty member in the Department of Plant Agriculture.

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A FAMILY PORTRAIT

Photographer's University ties span the 20th century and include the U of G shepherd

By ANDREW VOWLES

WHAT WAS THE BEST PART about growing up with a veterinary pathologist for a father?

Dean Palmer grins as he recalls the samples that his father, Nigel, used to bring home from the office for his children's school projects.

That dissected lamb certainly made an arresting science fair entry for Dean's sister one year. And then there was the eye-catcher that Dean himself took to show his grade-school classmates. "I remember having the best things for show and tell," he says. "I had cow eyeballs once — that was great."

Unlike some artists, Palmer has left his animal-parts phase behind him, choosing to draw viewers through his signature black-and-white portrait photography. Among the Guelph-area clients of his downtown studio, called The Scenario, are several departments around his U of G alma mater — what is arguably his family's second home.

Since the late 1800s, the University campus has been classroom, workplace and playground for five generations on both sides of Palmer's family. Besides claiming ties to all three founding colleges, his lineage includes not just the veterinary pathologist but an entomologist and even the former University shepherd. Given that pedigree, perhaps it's no surprise that when Palmer totes his tripod and camera bag on campus for an assignment, he often finds a personal connection to the location — and even to the individual he's photographing.

Last year, he got a chance to reacquire himself with his former drama professor Judith Thompson, whom he shot for a *Guelph Alumnus* profile. Called recently to photograph physics professor Elisabeth Nicol for an @Guelph story, he gave his characteristic ironic chuckle over the phone, then said, "I know Elisabeth, she's my next-door neighbour."

Sitting in the sunshine behind Alumni House, he says: "When I'm here, it's not like six degrees of separation, it's like two degrees." For example, you need look no further than that grey board-and-batten building behind him.

Occupying a table in the foyer of the former sheep barn is a stuffed sheep, presented in 1992 when the building was rechristened as the home of the University's alumni, development and public affairs functions. As noted on the accompanying brass plaque, "Mary" the sheep was a gift of Harry Palmer, Dean's great-uncle, who retired in 1965 after 37 years on campus.

For most of that time, Harry had been the University shepherd, tending up to 120 sheep used in teaching programs and helping students prepare their entries for College Royal showings. He lived on campus at the entrance to Arboretum Road, roughly where today's child-care centre stands, next door to the sheep barn.

Harry had arrived at the University through a lucky break. Having emigrated from England in 1927, he had taken whatever work he could find, including laying track with a railroad gang in Guelph. His landlord offered him a day's work in the dairy

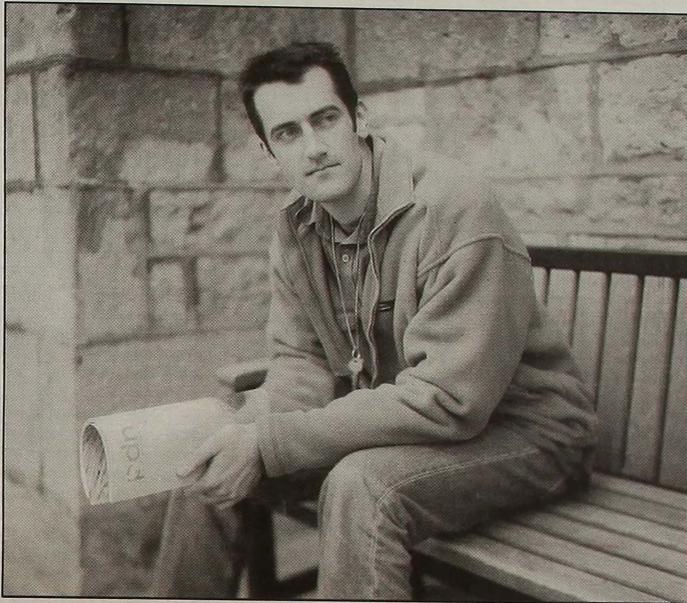


PHOTO BY THOMAS KING

barns of the Ontario Agricultural College — a day that turned into almost four decades and allowed him to apply the shepherding trade he'd learned in his native Northamptonshire.

Harry was only the first of his family to emigrate from England. During the early 1950s, his nephew Nigel came to Canada as a teenager and eventually completed his studies at OVC. He retired a few years ago as a veterinary pathologist with the Ontario Ministry of Agriculture, Food and Rural Affairs.

Dean Palmer says his father was highly regarded in his field — Harry co-edited a basic text called *Pathology of Domestic Animals* — but was never much for protocol. "This sums up my dad," says Dean, recalling a photo session at which his father presented his book to several University and government dignitaries. "They ended up killing the photo because Dad wore his coveralls."

Nigel had married Judy Goble, who graduated from the Macdonald Institute in 1962, two years before the institute, OVC and OAC came together to form U of G. Until her retirement about five years ago, Judy worked as a teaching assistant in the Department of Chemistry and Biochemistry.

Dean recalls childhood visits to the University and taking in the sights — and smells — of the labs in the Chemistry and Microbiology Building and at OVC, where his father worked.

For variety, Dean would head over to see entomologist Harold Goble, his maternal grandfather, who had graduated from OAC in 1931. Goble wrote papers and bulletins on biology and control of insect pests and advised farmers and home gardeners alike on pest-control strategies. "I have memories of him at work in Graham Hall," says Dean. "I remember I loved going there during College Royal because they always had chocolate-covered grasshoppers."

His maternal ties to U of G go back even further. It was in 1900 — the same year Harry Palmer was born in England — that Dean's great-grandfather Fred Goble graduated from OAC. As with the University shepherd-to-be, farming was in the Goble blood. Fred's ancestors had arrived in Canada along with the United Empire Loyalists and settled down to farm around what is now Gobles near Woodstock.

Perhaps it was those childhood visits to U of G that Dean paid with his two sisters — including the occasional toboggan outing to the Dairy Bush hill — that ingrained something in the three siblings. They all attended U of G in turn. The eldest, Barb, spent only one year here, although her husband, Jim Patterson, graduated from OVC before co-founding a local pet food company.

Dean's sister Donna is the most recent family graduate. Now working at a Caledonia veterinary clinic, she graduated from OVC last spring, nearly a century after her great-grandfather carried his OAC degree back to Woodstock. Extending the chain at this end of the century, Dean brought his own children, Audrey, 3, and Felix, 1, to their first College Royal this year. No

chocolate-covered insects, but...

In a family of scientists and farmers, Dean stands out for having chosen undergraduate studies in history and drama. "I'm the unscientific one," he says.

Two years after graduating in 1993, he turned his longstanding interest in photography into his full-time occupation. Always a camera buff — after his father lent him a camera, he turned the basement wine cellar into a darkroom — he had tried to work his hobby into every U of G assignment, including his undergraduate history thesis on wedding photography.

Although he still does the occasional wedding, most of his work for area clients and for his own portfolio ranges more widely. He's developed what he calls a graphic, almost theatrical style of portrait photography that plays well in black and white — a throwback, he suspects, to his lifelong fascination with classic films from *Casablanca* to *Psycho*.

"The variety in faces is so incredible, the architecture in a face," he says. "Someone told me that my photos tend to show people who they are. I think that's the ultimate compliment: 'That is so much a photo of me.'"

That style is evident in his current exhibition adorning one restaurant wall of the newly renovated Bookshelf in downtown Guelph. Called "Canadian Authors," the collection consists of portraits of 10 writers, including Thompson, U of G English professor Thomas King and several other writers with ties to the University.

Palmer, who first got turned on to Canadian literature while a student at Guelph, began photographing authors at the Eden Mills Writers' Festival two years ago. "It's a labour of love," he says of a project that he hopes will eventually yield enough portraits for a book of his own.

WOW!

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LETTERS

NO PINS, PLEASE!

I want to express my concerns about the University's recent employment equity survey. First, I believe the process is coercive and intrusive. Each form has a personal identification number, so if you *choose* not to return it, you can expect to receive a second copy by mail, followed by a phone call. Free choice and respect for privacy mandate a completely voluntary process with no possibility of tracking employees who *choose* not to complete the form. I cannot condone dishonesty, but I was amused by the response of one employee who filled in the wrong answers to all the questions! I was not amused by the response of another employee who was offended by the survey, but filled it in because she thought it was required.

Second, I do not accept the assurances given in the census brochure that the data will not be used to interfere with merit-based hiring. Assessment of individual merit has no need of such data, but employment equity does. Employment "equity" implicitly aims to achieve equal distribution of employees among arbitrarily selected groups of people. The result, on average, is selection of less qualified applicants.

In the January 2000 newsletter of the Society for Academic Freedom and Scholarship (www.safs.niagara.com), behavioural psychologist Doreen Kimura says: "The approximate ratio of applications for faculty positions in Canada is two men to every woman. Assuming that men and women applicants are equal in range of quality, the chances that the best person for the job will be a man are approximately two to one. Yet, several studies in Canada have shown that women are being hired not the expected one out of three times, but in significantly higher proportions. This

must mean that we frequently are not hiring the best person."

It's important to ensure that hiring is objectively based on merit and that disabilities or other personal characteristics are not arbitrarily used as excuses not to hire, but the survey data are not necessary to provide this objectivity. The data may have some valid use, but they must not be collected in a way that appears coercive. No PIN numbers, please!

Third, the process is a waste of finances. I don't have numbers to report, but consider that there are five consultants, 21 committee members, personnel costs from at least two administrative departments, personnel time to be invested in follow-up meetings in all colleges, printing and mailing costs, and personnel costs required to monitor employment equity on an ongoing basis. Yes, there is the federal threat of withholding grants, but if that's the principal reason for completing the survey, then do it at minimum cost and in the least intrusive way. Make it clear that completing and/or returning the survey is optional. Did I mention about not using a PIN?

Last but not least, the more we count people by categories, the more we accent arbitrary or unimportant (with respect to employment) distinctions and thereby exacerbate discrimination. The brochure makes apology for categories not yet recognized on the survey. So, be patient. It's only a matter of time until there will be pigeonholes for everyone, and then we will all be equal.

Prof. Art Hill, Food Science

A HAPPY ENDING

I wish to commend everyone involved in making this year's College Royal another success and to extend my thanks to a certain individual at OVC.

We particularly enjoyed visiting OVC's Teddy Bear Surgery. My children were so excited to bring their stuffed animals with them to have a "real" animal doctor give them a checkup and perform surgery. The students were wonderful with the children.

Unfortunately, on getting into our vehicle to leave U of G, we realized that my five-year-old's cherished friend (a stuffed puppy that he's had since he was born) and gloves were missing. I called OVC's Large-Animal Clinic Saturday around 6 p.m., not really hopeful of finding our lost friend. To say the least, my child was very upset on our way home from the University. The only reminder we had of this little friend was a photo taken of both my boys and their friends at the Teddy Bear Surgery. His eyes filled with tears as he looked at it all evening.

I spoke to someone named Louise (I never did get a last name), and she took all the details of our stuffed friend. She said she would be in the office first thing Sunday morning and would look and ask around. We received a phone call Sunday morning from her to say she had found a pair of boy's blue gloves and a stuffed toy resembling a lamb. It really didn't sound like our puppy, but I was happy enough to pick up the gloves and to see if it was, in fact, my son's stuffed animal. We arrived at OVC, and Louise handed me the gloves and his puppy! I couldn't believe it. I thought for sure someone would have picked him up and taken him home.

I would like to say a big thank you to Louise for all her help in finding our lost friend. She went out of her way to make my child happy and I really appreciate that. All staff were very friendly throughout the campus.

I've been attending College Royal since I was a little girl, and it is always a pleasure to attend the open house. I hope it continues for many years and that my children, when grown, can enjoy all the interesting displays and activities with their children.

If not for Louise, this year wouldn't have had such a happy ending. She went out of her way for us. Funny how something as little as a stuffed toy brings out the caring thoughtfulness in people.

Carol McGuigan, Guelph

TAKING CARE OF BUSINESS

In the March *Atlantic Monthly* article "The Kept University," a subsection titled "The University as a Business" describes U.S. university activities in profit generation: patents, fostering and supporting professor-led new technology companies (which compete with other private firms), purchasing equity shares in professor-initiated and -controlled private enterprises, etc.

At Guelph, we're taking profit seeking and competition with commercial firms a step further. We're using public revenues from sources such as the Canada Foundation for Innovation (CFI) and Ontario Innovation Trust (OIT) to construct research facilities that compete directly (and unfairly) with private enterprises, many of which are owned or staffed by our graduates. The most visible examples of U of G commercialization are the Guelph Food Technology Centre (GFTC) and the proposed facility for social and food-safety communications research (FSFSCR).

Many private firms provide food-development and food-testing facilities and expertise to other agri-food firms. The GFTC duplicated some of these services and placed the

University in direct (tax-subsidized) competition with commercial food research firms (David Menzies, *Food in Canada*, April 1996). The FSFSCR proposal is to spend \$3.75 million (80 per cent from CFI and OIT) to add social science/communication research facilities to the FACS Building — a focus group facility, computer-assisted telephone stations, a sensory evaluation lab and a research theatre. They duplicate facilities provided by many privately owned firms that are readily available for academic researchers to rent most anywhere in Canada, including Guelph. U of G faculty can and do rent these facilities from time to time. And we already have a focus group facility in FACS that is seldom used for research.

The bottom line of the FSFSCR proposal is that Guelph will to some degree compete against private research firms for the same commercial clients and research budgets, with tax-subsidized facilities. This is a misuse of public funds and inappropriate for a non-profit public education institution.

If universities use public funds to compete with private enterprise, they should lose their tax-exempt status and pay taxes, pay dividends to shareholders (taxpayers), amortize the capital investment, etc.

The justification for the proposed FSFSCR facility is primarily to research "Canadian consumers' attitudes, knowledge levels, beliefs and value systems, the impediments to acceptance of new technologies, information required to make informed choices and concerns about biotechnology." The recent *Guelph Alumnus* article "Sensational Science or Science Fiction" says FSFSCR's mandate will be "to determine what consumers need to know to feel safe."

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LETTERS

These statements suggest the facility will be used to learn how to get consumers to accept biotechnology and genetically modified foods. Public concerns about biotechnology and genetically modified organisms (GMOs) seem to be focused on the long-term effects of these engineered, synthetic manipulations of nature on human life and health and the environment. All that's needed to overcome "the impediments" to consumer acceptance is unbiased evidence of the long-term safety of each genetic manipulation. The *Alumnus* article and other media coverage reveal that advocates of biotechnology (so far) have been unable to identify existing unbiased evidence about the long-term effects of biotechnology or GMOs.

The *Alumnus* article states: "People use herbal remedies without questioning them, despite the fact they undergo no testing." But herbal remedies have been subjected to more than 30 centuries of trial-and-error safety testing. Unfortunately, this testing resulted in many deaths and illnesses until the long-term effects were discovered. With respect to tobacco, one has to smoke for 30 or more years before the consequences become apparent. It's not unreasonable, therefore, that consumers want evidence of long-term consequences before accepting GMOs.

Can we be assured that the Canadian regulatory system, claimed by some to be the best in the world, will protect us? It's clear from the evidence in "The Kept University" and the Nancy Olivieri case that developers of products and those who profit from them are biased. It's less well known that, over the last decade, Ottawa and the provinces have been divesting themselves of direct responsibility and accountability

for testing food and drug safety. As Olivieri's accounts illustrate, Canadian drug testing relies almost completely on research and evidence provided by the developers and advocates of new drugs. Responsibility for assessing the safety (for humans) of new food products is assigned to Health Canada (not the Canadian Food Inspection Agency). But the processes for obtaining approval of new foods are less stringent and just as biased as those applied to new pharmaceuticals. So even if GMOs are declared not "substantially equivalent" and require approval, we don't have a process that can provide unbiased evidence of the short- or long-term effects of new food products.

At the recent Montreal conference, Canadian government representatives argued for allowing GMOs to be sold until evidence they're unsafe arises. Fortunately, other countries prevailed, and GM foods will at least be identified by labelling. But none of the countries seem to think it would be best to prove GMOs acceptably safe before selling them, so it appears that most world governments and the GMO industry favour using consumers as guinea pigs.

At a recent forum on corporate sponsorship, Prof. Keith Cassidy said a university's only true asset is its credibility. Unfortunately, with respect to agri-food issues, Guelph has long been a "kept University" and is now becoming a "taking care of business" university. The more Guelph scientists publicly argue for consumer acceptance of new agri-food technologies (rather than provide unbiased evidence of long-term effects), the more research dollars U of G receives from agri-food firms and the more Guelph competes (unfairly) with private re-

search firms, the less credibility we will receive — and deserve to receive — from the public.

Prof. John Liefeld
Consumer Studies

PREMISE OF ESSAY CONTEST WRONG

I was surprised to read only one letter of response to the March 15 insight "If I were Prime Minister" by Cory MacDonald — I had expected a litany of responses. Allow me to add mine.

In rereading the article, I admit to being at a loss to decide just where to begin because his political vision is so narrow and his thoughts so lacking in vision that one marvels that his essay was an award winner. The fault is not his alone, however, because the premise of the question put to the essay competitors is simply wrong-headed. "If you were the prime minister of Canada, what political vision would you offer to improve our living standards?" presupposes that an improvement in our living standards is the ultimate goal to which any PM should aspire.

UBC professor and ecological economist Bill Rees would disagree. His work on defining the "ecological footprint" of our society and others is ground-breaking work (pardon the pun). He has calculated just how much space on Earth is required for the upkeep of one coffee-guzzling, meat-eating, car-driving, garbage-spewing, air-conditioned North American — 18 hectare-equivalents of land. He and his colleagues also divided the available land mass on Earth by the number of people inhabiting it and came up with about two hectare-equivalents per person. This gives one a good idea of just how far our high-off-the-hog lifestyle has to drop before we achieve any sort of

global equality in this world. Of course, this also presupposes that true global equality is, in itself, a goal we should aspire to.

Judging from the tone of his essay, Cory MacDonald would, I am sure, eschew the goal of global equality in favour of the pre-eminent — and seemingly more popular goal (at least among the right-wing-controlled press) — of globalization, which he freely admits necessitates a rejection of "the nation-state, along with its concepts of sovereignty and autonomy."

I once heard on CBC Radio an interview with a high-flying, New York-based financial investor who lived in a mansion in north Toronto because New York, although a great place to work, was just too dangerous a place to raise his kids. He freely admitted that the top investors in the world are now so powerful that they can make or break national economies simply by deigning to invest or de-invest in nation-states. If nation-state governments enact something these investors don't like (environmental or labour-standards legislation, for example), the investors simply "hold the politicians' feet to the fire" and force nation-state governments to bow to their wishes, with threats of investment withdrawals. When challenged by the interviewer about the wishes of nation-state citizens who vote for politicians on the basis of electoral promises, he said this was just too bad, but "he who pays the piper calls the tune."

Is this what Cory MacDonald means by "rejecting the concepts of sovereignty and autonomy" for the sake of foreign financial investment? And is it indeed true financial investment? Stats Canada figures show that the majority of "foreign investment" in Canada is actually in

the form of acquisitions or takeovers of Canadian businesses, with all the inherent downsizing and job loss, and that little is in the form of new business investment. Cory MacDonald touts the benefits of NAFTA and the need to expand this type of trade deal. I will leave arguments to the contrary to the likes of Peter Lougheed, a former cheerleader for the trade deal who now has grave concerns about it.

Cory MacDonald also appears to have swallowed whole all the very misleading and often quite erroneous claims from the business elite about the so-called "brain drain," tax cuts and the benefits of emulating that bastion of free enterprise to the south, the United States. Would he also like to emulate the Third World poverty present in many ghetto areas of the States or the country's abysmal birth and infant health stats or the level of crime in most U.S. cities? Low taxes and a free-wheeling economy come at a price, a price that Canadians have time and again shown they are not willing to pay.

Cory MacDonald appears to be setting himself up to challenge Preston Manning and Stockwell Day for leadership of the CCRAP (or whatever it's to be called). I only hope this is the political road he follows — it will guarantee both his political oblivion and that he will never become prime minister of Canada, something the rest of us can be most thankful for!

Maggie Laidlaw
Human Biology and
Nutritional Sciences

* * *

@Guelph welcomes letters to the editor. They should be limited to 500 words and, whenever possible, submitted electronically. Send to bchance@exec.admin.uoguelph.ca.

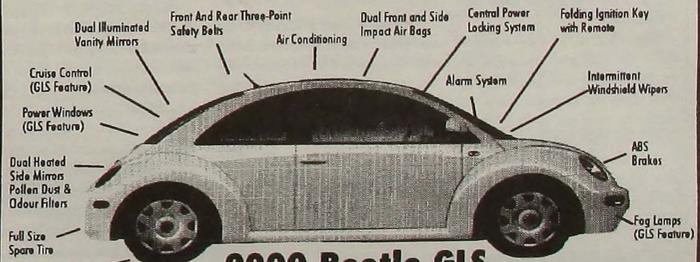
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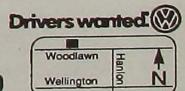
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Gender, Age Affect Tobacco Sales to Minors in Ontario

Stores that comply with other tobacco laws are least likely to sell to underage youth

ALMOST 28 PER CENT OF Ontario merchants are willing to sell tobacco to minors, with most illegal sales being made to girls and older youth, according to a U of G study.

Prof. William O'Grady, Sociology and Anthropology, also found that vendors are more willing to make illegal tobacco sales during hours when enforcement officers are less likely to be working. And stores that comply with other tobacco laws — such as posting signs and asking for identification — are least likely to sell to underage youth.

Working with principal investigator Tom Abernathy of Hamilton and Mark Asbridge of Toronto, O'Grady set out to identify and discuss factors influencing the sale of tobacco to underage people in Ontario, the first study of its kind in Canada.

The research was funded by the Ontario Ministry of Health, and the findings were published in the January issue of *The Canadian Journal of Criminology*, with limited results appearing in *Tobacco Control* last fall.

"About 90 per cent of all daily smokers begin smoking before the age of 20," says O'Grady. "Because so few people start smoking after their teenage years, prevention efforts are working to curtail access of tobacco products to young people."

The Ontario Tobacco Control Act of 1994 raised the legal age for buying tobacco to 19. It also increased fines for illegal tobacco sales to \$2,000 for a first offence and to

\$25,000 for three or more offences. These fines are among the most severe penalties in North America.

"It's well-known that youth access to tobacco remains a problem," says O'Grady, "but what is less clear is why so many merchants break the law, especially when the fines are so costly."

The researchers surveyed more than 400 tobacco retailers in 186 Ontario communities, using trained youth volunteers aged 13 to 18. Pairs of volunteers visited pre-selected stores while an adult waited outside.

"Care was taken to ensure that there would be little doubt that minors were involved," says O'Grady. "In other words, all the youths appeared to be under the legal age." Parental permission was obtained for youths under age 18.

The study revealed that the strongest influences on illegal tobacco sales were time of day, age of the youth and gender of the youths trying to buy tobacco. Findings include:

- Male teams were successful in buying tobacco only six per cent of the time, compared with 14 per cent for female teams and 22 per cent when the team included males and females.
- Older youths were more successful in their purchase attempts. The probability of sales was 13 per cent for 13-year-olds, 10.5 per cent for 15-year-olds and 65 per cent for 18-year-olds.

• Young people trying to buy cigarettes in the morning were successful only six per cent of the time, compared with an 18-per-cent success rate in the afternoon and a 21-per-cent success rate after 6 p.m.

• If a merchant complied with other tobacco-related laws such as posting signs and asking for identification, the likelihood of illegal sales was only 2.5 per cent, compared with 61 per cent when such compliance was lacking.

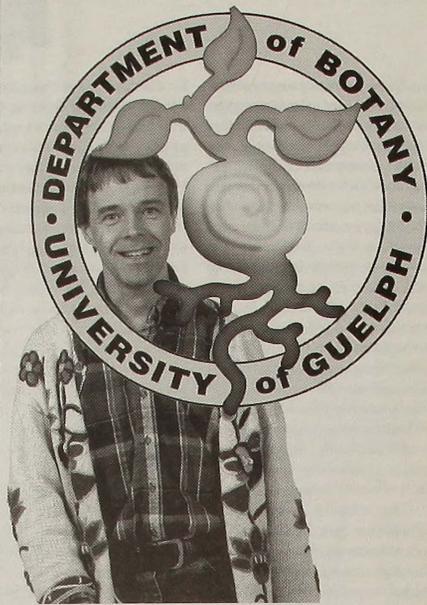
• Overall, 27.6 per cent of Ontario merchants were willing to sell tobacco products to minors, with gas stations and convenience stores having the highest "agreeing to sell" percentages at 33 and 26 per cent, respectively.

"If a vendor had reason to believe the youth was of age, they were more likely to sell the product," says O'Grady. "This explains why older youth and females, who mature earlier than males, were more successful."

Tobacco enforcement officers generally work from 9 a.m. to 5 p.m., so merchants are at greater risk of being charged during the day than in the evening, he adds.

The study suggests remedies such as passing laws to require identification checks for anyone who appears to be under 25 and extending enforcement into evening hours.

BY LORI BONA HUNT



A WINNING DESIGN

The Department of Botany has a new logo designed by research technician Lewis Melville, whose submission was chosen from some 50 entries from staff, faculty and students during a millennial contest. Melville says his three-colour organic design, depicting a seed with spiralling roots and shoot, contains "no straight lines or repeating elements, and the leaves and roots are breaking out of the boundaries of the encircling text, symbolizing nature's ability to confound our attempts to give it order or to contain it."

PHOTO BY DEAN PALMER/THE SCENARIO

Radio Fans Include Her Mom

Continued from page 1

ticularly for an academic more used to dealing in abstractions. "I'm a theorist. We tend to make hypotheses. You have to try to avoid that temptation."

She relies on the show's host to guide the discussion, including restating ideas in analogies that help their invisible audience grasp the similarity between, say, a torsion pendulum and a nursery mobile.

Occasionally she worries that fellow scientists might think she has glossed over details or neglected to tell the whole story. "You have to tell

yourself this is for the public. You try to say things in a picturesque fashion. You can't hit everybody just right."

The show often generates letters and phone calls to CBC from listeners. "I run into a lot of people who say they liked it," she says, adding that she often hears from former classmates and from at least one fan in Ottawa: her mother.

"I must admit I hadn't done much listening to the program before," says Nicol. "I regret that I hadn't been a regular listener." Now,

however, she has become one of the program's fans. "I've learned an awful lot."

For that American Physical Society conference, she wore two hats: she attended sessions as a physicist but also scribbled copious notes to use the material for last month's show. "I actually got a press badge."

Before this gig, her exposure to media had involved a few interviews for publications on and off campus. Those were less than satisfying experiences, she says, recalling one photo caption that mistakenly credited her as the discoverer of a particular material. "The hardest thing for scientists is to talk to the press," she says.

Still, Nicol believes her CBC spot allows her to convey not just the stuff of science but her enthusiasm for her work. "It's really important for scientists to explain their work. I think it's important that the public understand what we do."

So what's next—maybe a TV science show akin to *The Nature of Things*? "I don't think I'm David Suzuki," she says. "Besides, I'm not going to wear a fig leaf."

BY ANDREW VOWLES

IN THE NEWS

Prof. Doug Powell, Plant Agriculture, was quoted in the Feb. 22 issue of *The Medical Post*, talking about genetically modified foods. He was also quoted in a March 17 *Toronto Star* article about farmers and pesticide use.

The U of G Library was mentioned in a March 6 *Toronto Star* article about how libraries are changing "the rules" to compete with bookstores, including allowing food and drinks. The article quoted chief librarian Mike Ridley.

Prof. Brian Doidge of Ridgeway College was quoted in a March 8 *Toronto Star* article on corn subsidies and farmers. The article was also distributed by Canadian Press and appeared in numerous Canadian newspapers.

Research by Arboretum horticulturist Henry Kock was the topic of a March 11 column in the *Toronto Star* on Dutch elm disease. The

article detailed Kock's efforts to repopulate Ontario with elm trees that can withstand the disease.

Prof. Ann Clark, Plant Agriculture, was part of a CBC documentary that aired March 13 on *The National Magazine* about genetically modified foods.

Research by Ali Khan, Plant Agriculture, and Profs. Jane Robb and Ross Nazar, Molecular Biology and Genetics, was the subject of a March 19 Canadian Press story. The professors were interviewed about their research to develop a detection method for a fungus that is responsible for half of all potato losses in Ontario.

A March 23 *Toronto Star* article focused on a U of G study about the burden tuition places on low-income students. The article included quotes from master's graduate Linda Quirke and Prof. Ian McMillan, Animal and Poultry Science.

@Guelph Schedule

Publication Date	Copy Deadline
April 26	April 14
May 10	May 1
May 24	May 15
June 7	May 29
June 21	June 12

APPOINTMENTS

Elaine Chang of Philadelphia will join the School of Literatures and Performance Studies in English as an assistant professor Aug. 1.

Romita Choudhury of Calgary has been appointed assistant professor in the School of Literatures and Performance Studies in English, effective Aug. 1.

Leonie Marks of the University of Missouri-Columbia will join the Department of Agricultural Economics and Business as an as-

stant professor July 1.

Dan Meegan of the University of Rochester will join the Department of Psychology as assistant professor Aug. 1.

Lana Trick of Richmond, B.C., will join the Department of Psychology as assistant professor Aug. 1.

Michael Wirth of Cheltenham, Australia, joined the Department of Computing and Information Science as assistant professor April 1.

CLASSIFIEDS

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CCM men's five-speed bicycle, excellent condition, leave message at 836-3252.

Yamaha PSR220 keyboard, 100 background styles and instrumental voice selections, one-touch setting and chord memory, Irene, Ext. 6758.

1990 Pontiac Sunbird, two-door, four-cylinder automatic, sunroof, gauge package, power train, new exhaust, alternator, front brakes and rear shocks, includes four JL-10wv subs in custom-built box, 846-0769 after 5:30 p.m.

Modern dining room table with six chairs, dark glossy wood, chairs have high backs and white seats, excellent condition, Louise, 763-2284.

Pale green mini window blinds, 43 inches long, 22 1/4 inches wide, new, custom-ordered, Ext. 6208 or send e-mail to beardow@uoguelph.ca.

Sega Genesis, 16-bit controller plus three games, including Sonic the Hedgehog, Mortal Kombat and Alien 3, Ext. 6183 or 829-2299 after 6 p.m.

Two tickets anywhere Air Canada flies, valid until June 14, Maggie, 822-2952.

Full-size violin, leather case, instructional method book, never used, mint condition, 837-1803.

1997 gold/tan Saturn sedan, four-door, five-speed, power steering, air, original owner, 72,000 km includes extended warranty to six years or 120,000 km, leave message at 836-9652.

Large Little Tikes children's sandbox/pool, good condition, 836-0125 after 5 p.m.

1987 Mercury Tracer, four-door hatchback, automatic, one owner, all records, reliable, 184,000 km, Ext. 2623 or 763-6368.

Quick Tax Program 1999, brand new, Ext. 8308 or send e-mail to cindy@physics.uoguelph.ca.

Maple syrup and maple butter, Brenda or Mark, 826-6830.

Large dog crate, apartment-sized washing machine, dusty rose ceiling fan with three lights, Linda, 767-6225.

Computer, AMD K6-11400CHIP, 128 MEG RAM, 4 GIG HD, USR 40X CD, USR 56K voice modem, bilingual keyboard, includes assorted software; Peugeot Horizon hybrid bicycle with helmet and accessories; Apollo triathlon bike with computer and bottle; Schwinn Bowflex exerciser with belt; Clearmint phone with case and charger, digital only; leave message at 767-1333.

Handmade wooden clothes dryers, Ext. 6580.

FOR RENT

Furnished one-bedroom apartments on campus, must be affiliated with the University, available May 1, \$681, \$718 and \$722 a month inclusive, Ext. 6884.

Furnished basement bedroom, kitchen and bath shared with one other person, laundry, on bus route, close to campus, non-smoker, no pets, mature student only, \$350 a month inclusive, Helen, 822-1354 evenings.

Furnished bedroom in quiet south-end house, close to campus, bus and shopping, central air, parking, non-smokers, no pets, \$495 a month inclusive, leave message at 824-1568 or send e-mail to xiaomins@uoguelph.ca.

One-bedroom lower-level apart-

ment in adult home, newly renovated, separate entrance, air, laundry, parking, private patio, non-smoker, no pets, professional adult preferred with good employment history, available May 1, \$625 a month plus portion of hydro, first and last months' rent required, 823-0331 after 5 p.m.

Quiet, clean furnished bedroom with kitchen to share, linen provided, laundry, basement entrance, parking, non-smoker, no pets, no overnight guests, suitable for visiting student or professor, \$350 a month inclusive, 824-0950.

Two-bedroom water-view cottage, four miles north of Sauble Beach, barbecue, non-smokers, no pets, adults only, \$450 a week for July and August, leave message at 763-1236 or send e-mail to lbardwell@uoguelph.ca.

Two-bedroom furnished apartment in south-end residential home, ground level, private entrance, central air and vac, parking for one vehicle, non-smokers, no pets, \$800 a month inclusive, one-year lease beginning May 1; furnished three-bedroom home in south end, deck, Jacuzzi, air, non-smokers, no pets, available July 1 to Aug. 30, 2000, \$2,300 a month, Carol, 823-1857.

WANTED

Two-bedroom downtown apartment for single professional, starting July 1, need place with lots of light and place to keep bicycles, references available, 829-2459.

Five-bedroom house for five mature students (four females, one male), non-smokers, studios, starting Sept. 1 (will consider May 1), references available, rent between \$275 and \$375 per person a month, send e-mail to dchute@uoguelph.ca.

Furnished/semi-furnished accommodation for new faculty member from July 2000 to July 2001, Romita, 403-247-4198 or send e-mail to rchoudhury@MTRoyal.AB.ca.

Two-bedroom house or apartment for professional couple, downtown or south end of Guelph, laundry, parking, Ext. 3548 or 824-2104.

Used good-quality microscope, suitable for a gifted high school student, send e-mail to srogers@plant.uoguelph.ca.

German shepherd, aged six weeks to six years, prefer large-boned, non-registered, any colour, loving home, experienced pet person, Marshal, Ext. 8250 or 826-7866.

Student wants your gardening, design or architecture magazines when you're finished with them, leave message at 767-1993.

Room for female student from April 27 to Aug. 31, within 20-minute walk of campus, non-smoker, no pets, send e-mail to zhangzhivu@hotmail.com.

To borrow or rent, a machine that converts eight-mm movie film to VHS video format, cralst@uoguelph.ca.

One-bedroom apartment close to bus/train station, smoker, send e-mail to jlawless@passport.ca.

Grad student seeking summer sublet, one-bedroom or bachelor apartment, up to \$300 a month inclusive, housesitting also an option, send e-mail to jentigert@hotmail.com.

Bachelor or one-bedroom apartment for business professional, 741-7663.

Two-bedroom apartment for two responsible female students for Sept. 1, laundry facilities, \$300 to \$400 a month per person, references available, send e-mail to murphy@uoguelph.ca.

Willing to share driving or costs of a ride from Victoria Street/Belmont Street in Kitchener to U of G, arriving at 8 a.m. and leaving at 4:45 p.m., Ext. 6199.

Large room or small apartment for May 1 for a mature male part-time technician, \$400 to \$500 a month inclusive, 821-3948.

One-bedroom or bachelor apartment for quiet fourth-year female student, within 20-minute walk of campus, laundry, non-smoker, no pets, parking required, September to April 2001, Emily, 836-9182.

Small, inexpensive bachelor apartment or self-contained room in quiet home for mature female student, references, housesitting/gardening experience, Betsy, 519-433-9724 or send e-mail to bblokker@hotmail.com.

Seeking fourth-year landscape architecture student to design residential landscape, send e-mail to csoua@alumni.uoguelph.ca.

High chair, car seat, good condition, Ext. 6581.

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Music teacher offering lessons on several instruments at various levels, U of G graduate, 20 years' experience, 826-9125.

Professional word-processing, camera-ready laser copy, reasonable rates, 767-1066 evenings.

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Care for your dog in my home while you travel, Cobi, 836-8086 or send e-mail to cdemmers@uoguelph.ca.

Classifieds is a free service available to staff, faculty, students, alumni and retirees of the University. Submit items to Linda Graham on Level 4 of the University Centre, fax to 824-7962 or send e-mail to lgraham@exec.admin.uoguelph.ca. For external and commercial advertising, call Brian Downey at Ext. 6665 or send e-mail to bdowney@exec.admin.uoguelph.ca.

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• Moshe Hammer and Norbert Kraft

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Moshe Hammer is a world-class virtuoso violinist admired for his artistic style, unique interpretations and magical tone. Norbert Kraft is a concerto guitar soloist.

• Stan Rogers Coffee House Tribute

Saturday May 20, 2000 • 8:00 p.m. • \$20

"A Coffee House in a Concert Hall" Featuring Paul Mills (aka Curly Boy Stubbs), Ariel Rogers, Brenda Lewis with Nonie Creta, Mark McNeil, John Shymko, Ian Moleworth with Bob McLean. In addition, recorded songs from Stan's collection with slides will be presented. Coffee and desserts included.

• Edward Auer — Piano

Saturday, May 13, 2000 • 8:00 p.m. • \$20

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ARBORETUM

Horticulturist Henry Kock will lead a workshop titled "A Woodland Garden" May 2. Two sessions will be offered — from 9 a.m. to noon and 1:30 to 4:30 p.m. Cost is \$35. Registration and payment are required by April 25. Call Ext. 4110 to register.

The Arboretum will host a Mad Hat-Making Tea Party May 3 from 2 to 4 p.m. The afternoon will include an interactive talk by Melody Wren on the history, traditions and rituals of tea. Cost is \$15. Registration and payment are required by April 19.

Mary Ann Moore leads "Journaling in the Garden," a series of three workshops, May 9, 16 and 23 from 10 a.m. to noon at the Arboretum Centre. Participants will explore the gardens of the senses, colours, memories and dreams, with the assistance of nature. Cost is \$30. Registration and payment are required by April 25.

The Arboretum is offering two workshops on warblers in April and May. "Level 1: Butterflies of the Bird World" runs April 25 from 9 a.m. to 4 p.m. and includes a morning hike May 13, beginning at 6:30 a.m. "Level 2: The Less Common Ones" is slated for May 2 from 9 a.m. to 4 p.m. Sessions will be led by naturalist Chris Earley and Richard Tofflemire. Cost of the first workshop is \$63, with registration and payment required by April 18. Cost of the second workshop is \$45; register by April 25.

ART CENTRE

The Macdonald Stewart Art Centre's brown bag lunch series continues with a discussion of creativity by fabric artist Sally Melville April 18 at noon.

An opening reception for the exhibition "Linda O'Neill: Objectum Quo" will be held April 19 at 4 p.m. at the art centre. The exhibition will continue until Aug. 4.

CONCERT

The School of Fine Art and Music presents final student voice recitals April 19 at 4 and 7 p.m. in MacKinnon 107. Performing at 4 p.m. are sopranos Natasha Croskell, Heather Gunn and Stephanie Eltervoog. Performing at 7 p.m. are sopranos Daphne Lachaine and Emily Schryer. Accompanists are Mary Louise Vosburgh and Betty Maher. Everyone is welcome to attend.

NOTICES

The Guelph Food Technology Centre (GFTC) will hold its annual trade show April 27 from 9 a.m. to 4:30 p.m. at the centre. Cost is \$15 for GFTC members and \$20 for non-members and must be paid by April 20. To register, call Alistair Honeyford at 821-1246, fax to 836-1281 or send e-mail to gftc@uoguelph.ca.

Alumni-in-Action will hold its annual general meeting and spring luncheon May 10 at 11:30 a.m. at the Arboretum Centre. Guest speaker is musician James Gordon, founder of the group Tamarack. For tickets, call Carla Bradshaw at Ext. 6657.

U of G is launching a free, interactive and supportive program to help students who are trying to quit smoking. "Choose Choice" offers students trained counsellors, easy assessment, constant support and a variety of other services. For more information, call the Wellness Centre at Ext. 6150 or 3327.

The Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) has introduced "Healthy Futures for Ontario Agriculture," a four-year, \$90-million program that targets applied research in the following areas: rural water quality, field-to-fork food safety and quality, and healthy futures innovation. Researchers can submit pre-proposals directly to OMAFRA; final proposals must be signed by the Office of Research. For applications, call 826-3898, fax to 826-4335, send

e-mail to hfoa@omafra.gov.on.ca or visit the Web site www.gov.on.ca/OMAFRA. Information and applications are also available in the Office of Research outside Room 224 of the Reynolds Building or by calling Ext. 4807.

MFA end-of-term graduate critiques will be held April 24 and 25 in the Zavitz Hall Gallery. Members of the University community are welcome to attend.

The Guelph Food Technology Centre (GFTC) is offering a wide range of technical training courses for the food industry in May. These include technical symposiums on "Thermal Processing: Principles and Practices in Food Preservation" May 1 to 5, "Effective Training for the Plant Floor" May 4 and 5, "Canadian Food Regulations: An Overview" May 8 and 9, "Membrane Technology: Value-Added Applications" May 10 and "Microbiology 1: Practical Food Microbiology and Troubleshooting" May 23 to 25. GFTC is also offering a diploma in food hygiene and safety May 1 to 5 and a series of four HACCP programs throughout the month. For more information, call Marlene Inglis at 821-1246, fax to 836-1281 or send e-mail to minglis@uoguelph.ca.

SEMINARS

"Food, Energy and Your Weight" is the topic of dietitian Heidi Smith April 13 at 6:30 p.m. at the Health and Performance Centre. Cost is \$15. Register at Ext. 3254.

The Department of Chemistry and Biochemistry presents Louise Edwards of NPS Allelix Corp. discussing "PolyGuanidino Substituted Sugars as Anti-Viral Agents: TATAR Inhibitors for HIV-1" April 14 at 3:15 p.m. in MacNaughton 222.

The Department of Economics visiting speaker seminars continue with Byron Spencer of McMaster University explaining "Population Aging and Its Economic Costs: A Survey of

the Issues and Evidence" April 14 in MacKinnon 235. On April 27, Shulamit Khan of Boston University speaks in MacKinnon 238. The seminars begin at 3:30 p.m.

"Markers for Thermal Tolerance in Rainbow Trout: A Torrid Tale of Tepid Trout" is the topic of graduate student Guy Perry April 18 in the Axelrod Institute of Ichthyology seminar series. The talk begins at 1 p.m. in Axelrod 168.

The Department of Microbiology presents David Cotter of the University of Windsor considering "Environmental Regulation of Signalling Pathways During Dormancy and Germination of *Dictyostelium discoideum*" April 19 at noon in Food Science 128.

THESIS DEFENCES

The final examination of M.Sc. candidate Bonnie Cohen, Family Relations and Applied Nutrition, is April 14 at 9 a.m. in HAFSA 331. The thesis is "Health Behaviours of Secondary School Students." The adviser is Prof. Susan Evers.

The final examination of Kevin Segall, a PhD candidate in the Department of Food Science, is April 14 at 9:30 a.m. in Food Science 128. The thesis is "The Relationship Between Dairy Emulsion Properties and the Adsorbed Milk Protein Layer: Applications in Ice Cream." The adviser is Prof. Doug Goff.

The final examination of M.Sc. candidate Tana McDaniel, Zoology, is April 18 at 9 a.m. in Axelrod 265A. The thesis is "Direct and Indirect Interactions Between Two Ranid Frogs, Pickerel Frogs (*Rana palustris*) and Leopard Frogs (*Rana pipiens*)." The adviser is Prof. James Bogart.

The final examination of M.Sc. candidate Laura McConachie, Chemistry and Biochemistry, is April 19 at 9:30 a.m. in MacNaughton 222. The thesis is "Novel Base and Palladium

Mediated Preparations of Sulfur Heterocycles." The adviser is Prof. Adrian Schwan.

The final examination of Heather Goudy, a PhD candidate in the Department of Plant Agriculture, is April 19 at 11 a.m. in Crop Science 116. The thesis is "Evaluation of Site-Specific Weed Management and Implications for Spatial Biology of Weeds." The co-advisers are Profs. François Tardif and Ralph Brown.

The final examination of PhD candidate Bernadette Ardelli, Zoology, is April 20 at 9 a.m. in Axelrod 265A. The thesis is "A Chemotherapeutic Strategy Against Salmonid Cryptosporidiosis." The adviser is Prof. Patrick Woo.

The final examination of M.Sc. candidate Maria Urdaneta, Animal and Poultry Science, is April 25 at 9 a.m. in Animal Science and Nutrition 141. The thesis is "Quantitative and Qualitative Feed Restriction and Compensatory Growth in the Broiler Chicken." The adviser is Prof. Steve Leeson.

The final examination of Ian Walker, a PhD candidate in the Department of Geography, is May 1 at 1 p.m. in Hutt 234. The thesis is "Secondary Airflow and Sediment Transport in the Lee of Transverse Dunes." The adviser is Prof. Bill Nickling.

COMMUNITY EVENTS

The Waterloo-Wellington Wildflower Society will meet April 19 at 7:30 p.m. at the Arboretum Centre. Colleen Simmons will discuss "Medicinal Plants in Your Home and Garden." Everyone is welcome.

The Guelph Civic Museum hosts a Founders' Day History Fair April 16 from 1 to 4:30 p.m. The event will feature performances by musician James Gordon at 2 and 3 p.m. Admission is \$3 for adults, \$2 for seniors and students and \$8 for families.

Public Trusts Safety of Prepared Foods, Survey Finds

More and more shoppers are turning to convenience foods for family meals

WITH CONVENIENCE FOODS come a new concern: food safety. In the past, food-safety training for employees has been a stronger tradition in restaurants and institutional food services than in grocery stores.

Prof. John Walsh, director of the School of Hotel and Food Administration, wondered how the public feels about this. To find out, he conducted a survey of consumer perceptions of supermarket food-safety procedures — and learned that consumers generally believe the convenience foods they buy at the supermarket are safe.

This issue arises from a growing phenomenon called "home meal replacement." This refers to society's shift from meat-and-potato dinners served at 5:30 p.m. by Mom to the diversity of family structure and food shopping now available. Increasing numbers of families no longer cook meals at home where they eat together, but instead choose semi-prepared or fully prepared foods bought from the grocery store or restaurant.

Twenty years ago, the situation was different because there were two distinct shopping groups, says Walsh. One included people in food

stores shopping for family meals. The other consisted of those who bought and ate meals away from home — everyone from the lone business traveller to entire families out for dinner.

Now, with the introduction of semi- and fully prepared foods, those two groups have blurred. Grocery stores sell foods that are semi-prepared or even ready-to-eat, such as barbecued spareribs, deli-style sandwiches and potato salad.

This is where a potential problem lies. For a long time, strict regulations and standards have applied to restaurants and their employees. To-

day, many restaurants have mandatory educational training courses based on food safety. But what about retailers now selling prepared food? Anyone can walk into any grocery store and buy assorted salads and hot meats. Are the store employees trained like those in commercial food service? Do the same safety standards apply? Should they? And most important, how does the public feel about this?

Walsh set out to answer these questions by conducting a telephone survey of 100 residents in Guelph and the surrounding area. Questions were simple, asking for information

such as where people shop, what they buy and which store employees they believe should be wearing gloves.

Preliminary results show the majority of shoppers (about 75 per cent) perceive food safety as satisfactory at their grocery stores and around 20 per cent find it excellent. The remaining five per cent believe food safety is unsatisfactory.

"People feel comfortable with the level of food safety in grocery stores," says Walsh, "but safety procedures and standards are different than those in the food-service industry."

BY MARIANNE CLARK
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