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## **Bamboo Beat**

Instrumentalist Ngoc Bich performed on the Dan T'rung, a suspended bamboo xylophone from Vietnam, for diners at the festival of Asian foods and culture held at the CK Choi Building last month. The street foods celebration continues March 17-21 and April 14-18. For more information, call 822-2746.

# Molecular biologists win Hughes Institute grants

#### by Charles Ker

#### Staff writer

Vanessa Auld and B. Brett Finlay fight disease one molecule at a time.

The UBC scientists have received \$275,000 (U.S.) each from the Howard Hughes Medical Institute to further re-

coli), two bacterial strains which result in typhoid fever, debilitating diarrhea and other gastrointestinal diseases.

E. coli, cause of the "hamburger disease" introduced in 1995, grabbed headlines last summer when almost 10,000 Japanese children were stricken and 11 died. Unpasteurized apple juice was the source of another fatal outbreak last fall

in B.C.

and the

western

# Ottawa commits dollars to research

#### by Stephen Forgacs

Staff writer

The creation of an \$800 million foundation in the 1997 federal budget shows a firm commitment by government to building Canada's research and development capabilities, said Bernard Bressler, UBC vice-president, Research.

This is extremely favourable for the country's research community," Bressler said. "It sends a clear message that the government has linked the long-term recovery and sustainability of our economy with research and development.'

The government announced the creation of the Canada Foundation for Innovation to provide financial support for the modernization of research infrastructure at post-secondary educational institutions and research hospitals.

The foundation, which will operate as an independent corporation, will be responsible for dispensing about \$180 million annually over five years.

"Since UBC is such a research-intensive university, the creation of the foundation seems very promising," said Bressler. "We will use this as a unique opportunity to enhance the infrastructure that supports research at UBC.'

The funds provided to the foundation will cover capital costs involved in modernizing the infrastructure needed to do research in the areas of health, environment, science and engineering. This includes acquiring state-of-the-art equipment, establishing computer and communications networks, and creating research databases and informationprocessing capabilities. Funds will also cover upgrading of laboratories and installations or, in some cases, new construction.

Shirley Neuman, dean of the Faculty of Arts, also applauded the creation of the foundation.

"Much of what one does in the area of See BUDGET Page 2

# Student projects fund needs injection

A fund that has helped finance extra- I include: curricular activities for UBC students for nearly 20 years is seeking to increase its endowment so it can continue to offer much-needed support.

The Walter H. Gage Fund is named for the former UBC presi-

dent who established a tradition of student aid programs and often used his own resources to assist students in crisis.

Gage served UBC for more than 50 years, five as president. The fund was established after his death in 1978 to provide grants of \$500 to \$2,000 for special student projects and initiatives that are not part of the academic curriculum.

"The innovative projects that students do on their own time can be

as important as their class work. It's tions Committee fund and the John M.

• sending six Pharmaceutical Sciences students to Winnipeg to take part in

a national professional development program; • helping the environmental law group

organize a two-day conference on campus;

> providing seed money for 25 students from four departments who are designing and building a full-size, solar-powered racing car for national and international competitions. Until now, the Gage

fund has generated about \$26,000 each year, but that's far from what is currently needed.

The need has been made all the more urgent by the depletion of the President's Alloca-



search into the genesis of nerve disorders and bacterial infectionsinnovative work combining genetics, biochemistry and molecular and cell biology. Finlay. a professor in UBC's

Biotech-

nology

Auld

and abet the passage of disease-causing bacteria in the human body. His focus has

been on salmonella and Eschericia coli (E.

Laboratory, looks at molecules which aid

United States. However, it is in developing countries where E. coli does the most damage, annually killing one million children. The onset Finlay of diarrhea leads to a fatal loss of fluids and eventual dehydration.

See SCIENTISTS Page 4

fascinating to see what the students do." said Jo Hinchliffe, chair of the committee that administers the fund.	Buchanan Memorial Fund, which has left Gage as the sole source of support
Some recent projects it has funded	for this type of project. See <b>GAGE</b> Page 2
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UBC authors write up a storm and no	ot just on paper



## Plant Operations earns praise

#### **Editor:**

I would like to publicly thank Plant Operations staff for the fine work they have done in and around both the Main Library and the Walter C. Koerner Library over the past year.

In June we moved the contents of the Sedgewick Library into the new Koerner "tower." This involved a good number of people, under the direction of Mike Hurren, and the job went very smoothly. We moved a good part of the Main Library over to the Koerner Library during the period from Dec. 20 through the first week in January. During that time the crew, under the direction of Lee Ferrari, moved furniture, equipment, and hundreds of boxes containing the office collections of close to one hundred of our staff. The end of December was not without its excitement as the largest snowstorm to hit our area in the last 75 years stopped the Lower Mainland in its tracks. Our move was delayed for a few days, but despite this setback staff managed to complete the move in good time. Special thanks go to Mike Hanson and Mike McKeever who worked with us on both moves.

I'd also like to thank the painters, headed by Paul Rogan, for their work in the Main Library. Over the latter

## Budget

Continued from Page 1

health research requires consideration of the social and human impact and that is certainly a strength in this faculty," she said. "You can't do really successful work about the environment either without considering human and social factors, and I think that the sciences are increasingly recognizing that."

Neuman said that the foundation's stated emphasis on research infrastructure, including information technology, is also good news for the faculty.

"There is a lot of opportunity there if we recognize that the data that information technolgy transmits is not just num-

#### LETTERS POLICY

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part of 1996 they did a great deal of work for us, leaving the Fine Arts Library and the Science and Engineering Library in particular looking better than they have for many years. The painting has been a real morale booster for us all and I'm more than grateful to Dan Leslie for making it possible for us to have so much work done.

I owe thanks to Marty Cole for his support over the year. He is always quick to help me out if I ask, and is unfailingly friendly and patient. Together with John Bramley he responded, in the middle of the night, to the flood we had last year in the mechanical room of the Main Library. John Bramley also has my thanks for his assistance in getting us a new elevator for the North

### Gage

Continued from Page 1

"Budgets are so tight on campus and many departments are reluctant to fund these projects because they are not academic or directly related to a course,' Hinchliffe said. "It is more important than ever to continue these grants because other sources of funding are drying

The fund is administered by a volunteer committee that includes alumni and students, which hopes to increase the Gage endowment through alumni donations and student Wing of Main. Rob Severson did a fine job as Project Manager for this project which gave us the elevator we so desperately needed.

The other people who help to keep this building functioning and to whom I owe a debt of gratitude include trades and utilities people, custodial people, and our Area Supervisor John Irvine.

I know that I have mentioned only a few of the many people whose hard work keeps the Library building functioning. But my thanks go to everyone who has worked with us over the year. Your efforts are greatly appreciated by us all.

Suzanne Dodson **Facilities and Preservation** Manager, UBC Library

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# J BC REPOR

UBC Reports is published twice monthly (monthly in

(from 18 to 30 months) for students who borrowed under the Canada Student Loan Program. Also, ancillary fees will be tax exempt and share the same tax status as tuition.

UBC Alma Mater Society (AMS) representatives acknowledged the positive aspects of the budget, but condemned reduced federal support for Canadian social programs.

"The few plums that have been given to students in this budget aren't even partial compensation for the enormous cuts to education this government has inflicted on students over the past few years," said Desmond Rodenbour, AMS policy analyst. The Canadian Federation of Students (CFS) said Finance Minister Paul Martin failed to provide for the long-term financial needs of students by not

providing a comprehensive student financial assistance package, including special opportunity grants for students with parental responsibilities. The CFS did, however, welcome the creation of the Canada Foundation for Innovation.

"This new investment in science and research cannot possibly compensate for the billions of dollars in transfer payments for post-secondary education that were cut in previous budgets, but it remains a very significant announcement," said Brad Lavigne, the federation's national chairperson. "In concrete terms, it will allow universities to r build and renovate their science and research facilities without straining their operating grants, a move that should lessen the urge to increase tuition fees yet again."

up."

In last month's Alma Mater Society elections, for example, a referendum question asked students to pay \$1.50 more in AMS fees, of which 50 cents would go toward the Gage fund. The referendum failed for lack

assessments.

of quorum, however. The Development Office has also made the Gage fund part of its Annual Fund appeal to

For more information about the Walter H. Gage Fund, contact Jo Hinchliffe at 822-9173.

alumni.

bers or even language, but that the visual and aural presentation of data is also information - information that demands expertise from the creative arts to be effective."

The foundation will not fund "operating" costs of research, such as salaries, regular maintenance or the ongoing operation of facilities. The foundation will accept applications from universities and colleges engaged in research, research hospitals, and associated non-profit organizations.

The budget provides students with short-term financial help in the form of an increased education credit (from \$100 to \$150 per month this year, climbing to \$200 per month in 1998) and an extended period of interest relief

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# Faculty, students make music at gala opening

"The hour has come."

While many music enthusiasts will recognize the title of the choral symphony by Canadian composer Srul Irving Glick, Jesse Read uses it to sum up the feeling running through the School of Music these days.

After two years of planning, the school's faculty and students are ready to present the gala inaugural concert in UBC's new Chan Centre for the Performing Arts on March 14.

"We are extremely excited about this very important event," said Read, director of the School of Music. "We knew that we would be making the first music to be heard in this dazzling, state-of-the art venue."

In addition to opening with Glick's symphony, faculty members chose a Mozart concerto and a Beethoven symphony to round out the two-hour concert.

Performing will be several of the School of Music's large ensembles including the UBC Symphony Orchestra, the UBC Choral Union and the University Singers, as well as invited community choral members of the Amabilis Singers, Vancouver Bach Choir, Chor Leoni Men's Choir, Douglas College Chorus and the Elektra Women's Choir.

Guest soloists are acclaimed pianists and faculty members Jane Coop and Robert Silverman, who will play Mozart's Concerto in E flat for Two Pianos.

The evening concludes with Beethoven's Symphony No. 9 in D minor featuring vocal soloists Nancy Hermiston, soprano, Diane Loeb, mezzo-soprano, Stuart Lutzenhiser, tenor and Gary Relyea, baritone.

Read will share the conductor's podium with School of Music colleague James Fankhauser.

What started in 1946 as a Chair of Music, held by famed violinist Harry Adaskin, evolved into a department and finally became the School of Music in 1959 when the university recognized the need for a Bachelor of Music program.

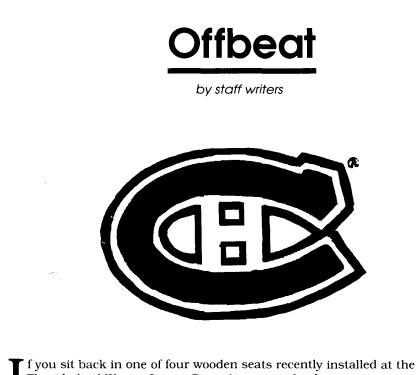
Since the early years, the school has grown from four faculty members and 27 students to 55 full-time and sessional faculty and 350 students including graduate students. Members of the school give about 200 performances each year.

"The new Chan Centre for the Performing Arts provides a long awaited place for audiences to enjoy the wonderful music offerings that we have," Read said. "It also greatly enhances our teaching and learning capabilities and lends a higher profile to UBC's music program in the community, which will help us attract top students and guest artists."

The school hopes to have continued access to the Old Auditorium as a rehearsal space until planned replacement facilities are completed.

Although the inaugural concert is by invitation, the School of Music is planning a series of public events and special joint presentations with the Chan Centre for the Performing Arts including a recital in November by celebrated tenor and alumnus Ben Heppner.

Many of the school's performances will remain free, Read said, and prices of its ticketed events held in the centre are not expected to rise.



Thunderbird Winter Sports Centre's main rink, close your eyes, and listen carefully, you can hear the shouts of hockey greats like Yvan Cournoyer, Maurice Richard, Jean Beliveau and Guy Lafleur, the echoing sounds of



Beethoven will be on the program when the Chan Centre for the Performing Arts opens March 14 with a gala says Jesse Read, director of the School of Music. Faculty and students of the school will be the featured performers.

# Students' Web page helps grieving families

#### by Stephen Forgacs

Staff writer

An Internet home page created by two UBC nursing students will help B.C. parents deal with the loss of a child to cancer and gain access to support and resources a B.C.'s Children's Hospital social worker says.

Susan Schmitten, who co-leads a bereaved parents group at the hospital, said the Web newsletter fills a gap in services offered specifically to parents who have lost a child to cancer.

"The group of parents that I work with feel it is really important that families outside the Lower Mainland have access to the support of people with similar experiences," she said. "And although many people don't have computers at home, most have access to them and therefore to an expanded range of services through this home page."

Fourth-year students Elise Eriksson and Ronda Tuyp put together the home page as part of a clinical nursing course, Nursing Care of Children and Families, in which students work with a client group to address a specific issue.

Tuyp said that while support groups and services do exist for people dealing with the loss of a family member, there is little that addresses the experiences of parents and siblings who have experienced the loss of a child to cancer and the often lengthy treatment period that precedes it.

ings to determine what gaps exist in the support available.

Gaps they identified include: people living in small towns and rural areas do not have access to the range of services; families often don't know where to look for support; limited support available during the very high stress period immediately following the child's death; and grief support not being specific enough to meet the needs of those who have lost a child to cancer.

Although Stutzer and Schmitten had considered creating a newsletter for some time, they had not found the time or resources to put one together and had not considered the Internet option. UBC Nursing Assoc. Prof. Judy Lynam, who teaches the fourth-year course, introduced the home page idea as an option in course projects.

"The Internet has tremendous potential in the field of health care," Lynam said. "And the kind of work that nurses do is often seen as being independent of technology or else dealing mostly with machines. This project is a means to explore the use of technology for a very human purpose, as a way to reach out to people."

Lynam said that, since neither student had much Internet experience, they worked with Gary Bowman of the School

slapshots and the roar of frenzied fans.

The seats in the rink's Molson Room, were salvaged from the Forum in Montreal before the wrecking ball leveled the old building.

"We're happy to have a piece of Canadian hockey history here," says Rick Noonan, co-ordinator of Athletic and Sport Facilities, who, with a little help from local Molson's people, managed to acquire the seats for UBC.

"They're in pretty good shape for originals. They're very narrow but quite comfortable, considering they're wooden."

Noonan, who saw the Montreal Canadiens play in the Forum on many occasions, says sitting in the seats brought back memories of the St. Patrick's Day riot in Montreal after National Hockey League Commissioner Clarence Campbell suspended Rocket Richard during the Stanley Cup play-offs, and of the Canadiens' glory days when they won the Stanley Cup in five consecutive years, twice.

"It was electric," Noonan says of games at the Forum. "You just walked in there and you could feel it. The game just isn't the same without the great old buildings like the Forum."

Those wishing to try out the dream seats in the Molson Room can do so by renting the suite for a meeting, party or to watch a T-Birds game. The room was rented for 10 of 14 T-Birds home games last year. The rental charge is \$600 for as many as 25 people, and includes wine, beer, food and a chance to relive a little bit of hockey history.

For information on renting the suite call Noonan or Pat Logan at 822-6121.

"Losing a child to cancer is one of the most devastating losses anyone can experience, both for the parent and for the sibling," Tuyp said.

Tuyp and Eriksson spent a clinical portion of their studies in the Oncology Unit at Children's Hospital from August to December last year. During that time they worked with families dealing with cancer treatment and interviewed parents who had lost a child. They also worked closely with Schmitten, a UBC social work alumna, and Cindy Stutzer, a clinical nurse specialist in the hospital's oncology program and clinical assistant professor with UBC's School of Nursing.

The students researched programs and services offered in the province and reviewed parent interviews and the minutes of the bereavement group's meetof Nursing on the technical aspects of the project.

"The home page option is a good way to introduce students to the Internet, and to have them learn first hand how it can be used," Lynam said.

Lynam, Eriksson and Tuyp are now working with Schmitten and Stutzer to determine how the home page can be maintained, refreshed and funded. The parents are also keen to see a "chat site" developed that would allow parents in different parts of the province to communicate with each other via computer.

"It's a great beginning for what can really be a provincial service. There's more to be done, but because of these two students, a project that has been on the 'to do' list has been translated into something that is absolutely usable," Schmitten said.

The newsletter, When a Child Dies of Cancer, can be found under Student Projects on the School of Nursing home page at http://www.nursing.ubc.ca.



Darrell Wong photo

Wood Products Processing Program co-op student Lahim Ravji works on a computer-guided router at Pine Falls Furniture Co. in Maple Ridge. Students in Ravji's class will be the first to graduate from the program and employers are already looking forward to putting them to work.

# Employers hungry for wood co-op grads

#### by Stephen Forgacs

Staff writer

Employers are snapping up students in UBC's Wood Products Processing Cooperative Education Program—evidence that the industry demand that led to the creation of the program is a reality, the program's director says.

"The response we've had from employers has been excellent," says Prof. Simon Ellis. "As a new program, we're still gaining momentum, but there's no question the wood products industry is ready and waiting to put our students and, in a few years, graduates to work."

The Wood Products Processing Program was launched in 1995 after UBC was selected to develop the program by an industry-led national education initiative. The program's first students are now in the third year of the five-year program.

"I made the right decision," says Rahim Lavji, a third-year student who started an eight-month co-op job, his second, in January. "I really like what I'm doing and can see myself doing this sort of work in the future."

Lavji, who's working for the Pine Falls Furniture Co., a Maple Ridge manufacturer of pine furniture, is one of nine students working at co-op jobs this semester. His classmates are spread across Canada, in Ontario, Manitoba, Alberta and British Columbia. Employers this semester range from Canadian Forest Product's research and development centre in Vancouver, to Loewen Windows in Steinbach, Man.

Pine Falls general manager Trevor Sandwell says the specialized knowledge that students are gaining in the Wood Products Processing Program is important to ensure the Canadian industry can compete internationally.

"We need people with advanced skills and knowledge to propel us into global markets, where we're competing with companies from around the world," he says. "We would not be able to compete with the skill level that we have now. We have to increase our technical skills and the technical level of our equipment as well.

"Our major competitors are Scandinavian manufacturers with highly trained staff and a superior level of technical equipment."

Students in the program spend a total of 19 months in work placements and a month gaining practical woodworking experience. The academic portion of the program includes courses in wood science, engineering and commerce.

Students start with two full school years of instruction before beginning their first co-op term of three months preceded by the month of woodworking. The following three years comprise equal time at UBC and in the workplace. The program is administered by the Wood Science Dept. in the Faculty of Forestry while the co-op portion is the responsibility of the Centre for Advanced Wood Processing. Members of the industry also continue to play an important role in shaping the program.

"Industry is still instrumental in helping us deliver the program," says Ellis. "Professionals from industry are frequent guest lecturers. That will continue into the future, allowing us to maintain a high degree of industrial relevancy."

Christine Forget, co-operative education co-ordinator for the program, says that, with word of the program spreading throughout the industry, the demand for students is increasing.

"I often have companies calling me to see if they can get a student to work for them. Last semester we had jobs left unfilled," says Forget, who also approaches companies she feels could benefit from hiring a co-op student or which one of the program's students has expressed an interest in working for.

There are 22 students enrolled in the co-operative portion of the program at present, nine in third year and 13 in second year. Another 16 students are in the first year of the program. Ellis says he expects a steady increase in enrolment with student numbers reaching 40 to 50 students in each of the program's last four years.

The program is expected to draw trans-

### Scientists

Continued from Page 1

E. coli has traditionally been treated through rehydration and antibiotics but Finlay says bacteria are rapidly becoming resistant to current medication.

According the Finlay, more than 96 per cent of all salmonella typhi coming out of India are resistant to multiple antibiotics.

"So if you're coming out of India and get typhoid fever you are basically guaranteed of getting multiple resistant bacteria," he says. "Under those cases there is a 50 per cent fatality rate because they can't be treated."

Apart from preventing infections with new vaccines, Finlay seeks to block the bacterium's ability to operate in the body.

He describes salmonella, one of the leading causes of death among HIV patients, and E. coli as having their own "little tool boxes" to manipulate human cells.

E. coli, for instance, is called an adherent bacteria because it sticks to the surface of human intestinal cells. Once in place, the E. coli secretes special molecules from its tool box into the host cell causing it to build a pedestal upon which the bacterium sits.

"We know a lot of the molecules the bacteria use to build these structures and if we make a mutation in one of those molecules, the pedestals don't get built and people don't get sick," says Finlay, whose lab was one of the first to examine what happens to mammalian host cells when they come in contact with bacteria. Salmonella, as an intracellular bacteria, infects from the inside of cells. It has a range of sophisticated molecular tools, the first of which tricks human epithelial cells into engulfing it. Epithelial cells line the nose, ears, mouth, stomach and intestinal tract forming a barrier, like Gortex, between the outside and the inside of the body. Once the bacteria breaks through the epithelial barrier of the intestine, it hitches a ride inside phagocytes (another molecular trick) which are designed to kill foreign particles entering the bloodstream. The phagocytes transport the salmonella to the liver and spleen where the bacteria grow and kill more host cells.

how the molecular process works.

"Our home-grown epithelial barriers look very much like what the bacteria would encounter in the human intestine," says Finlay. "They allow us to study how bacteria survive in cells, how they replicate, break out and spread to other tissue."

Finlay's lab is collaborating with several pharmaceutical companies to identify molecular compounds that will block these processes. One project with the local firm INEX seeks to control salmonella and other intracellular parasites by tricking cells into swallowing capsules of existing antibiotics. This technology would enable drugs to work from the inside out.

He is also working with another UBC spin-off company, Terragen Diversity Inc., to develop drugs to treat infections.

Auld, an assistant professor with the Dept. of Zoology, investigates molecular interactions between the brain's two basic cell types: nerve cells (neurons) and glial cells. Breakdowns in these interactions can lead to a variety of neurodegenerative diseases.

Auld's research explores how glial cells and neurons develop together in the peripheral nervous system (PNS), the sensory system existing outside the brain and spinal cord. There are about 100 billion neurons in the brain and up to 10 times that number of glial cells offering physical and nutritional support. Auld explains that neurons represent the body's wiring and glia provide the necessary insulation, or glial shealth, for that wiring. When the nervous system is setting up, glia can act as guideposts or highways to make sure nerves go to the right places. Once the nervous system is established, the glial shealth acts as a both a protectant against short circuits and an air conditioner, cleaning up residual ions or neurotransmittors left over from electrical firings between neurons. "To serve and protect, that's their role," says Auld, who uses the fruit fly. Drosophila melanogaster, as the model to analyze glial-neuron interactions.

gene specific to glial cells expressed in the fruit fly's embryonic PNS.

Gliotactin mediates the interaction between neurons and glial cells by setting up a barrier or membrane between the blood system and the nervous system. This so-called blood-brain barrier insulates and protects the nerves.

"The gliotactin protein sits in the membrane surface of the glial cell and has a region that sticks outside the cell that is interacting with what we hope is another protein on the neuron," says Auld. "Somehow they signal with each other to form this blood-brain barrier."

Mutations in the gliotactin protein lead to paralysis in fruit flies as the gene plays an essential role in establishing the glial wrapping of the PNS.

Auld will use the Howard Hughes grant to look for mutants or new genes that affect the development of glia and their interactions with the nervous system. The process involves isolating new mutations in Drosophila and looking for defects that involve glia.

"We'll be looking for anything that effects how the glia are positioned, how they migrate, how they wrap the neuron and anything that disrupts this development," she says. "At the molecular level, this would show up in a gene." In Drosophila melanogaster, the process of finding mutated genes that affect nervous system development is relatively straightforward because the fruit fly has a simple nervous system and small genome. Auld's long-range plans are to use the fruit fly as a springboard to discovering the same genes in vertebrate systems. She says that many genes important to vertebrate development were originally discovered in Drosophila. For instance, Auld believes that the corresponding protein to gliotactin in vertabrates will have the same biological functions as the Drosophila protein. The eventual cloning of vertebrate gliotactin will play an important role in establishing the connections between neurons and glial cells during the development of the nervous system.

Finlay grows models of epithelial cell barriers in tissue culture to determine

In 1991, Auld discovered gliotactin, a

Finlay and Auld are among 20 Canadians named International Research Scholars of the Howard Hughes Medical Institute. fer students into second year from colleges and universities across Canada, says Ellis, adding that efforts are being made to make the program more accessible.

"We're looking at offering second year in a distance education format because we realize a lot of these people are going to come from smaller communities in B.C. and elsewhere in Canada ," says Ellis. "It can be quite expensive for a student to come to the Lower Mainland."

The prospect of work upon completion of the program remains an important draw, Ellis says. And the wood products industry is proving its commitment.

"We're looking to the program to supply us with management personnel in years to come," says Sandwell. "It's absolutely critical that we're able to develop our people to meet the global challenge. We have to do it."



## **Hot Wheels**

Charles Ker photo

James White, in his fourth year of UBC's Engineering Physics program, showcased a model of a solar car in the Student Union Building during Engineering Week. White is part of a 36-member team which hopes to have a fullsized model ready by June.

# Astrophysicist detects star's birth 5,000 light-years away

#### by Charles Ker

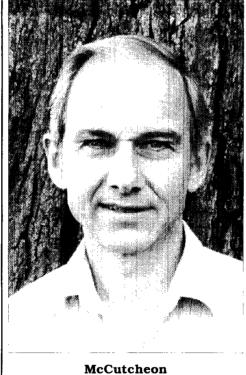
#### Staff writer

Astrophysicist Bill McCutcheon scans the night sky with radio telescopes in search of celestial treasure. Recently, he and his colleagues announced that they'd hit the jackpot with their discovery of a hot star-forming region 5,000 light-years away.

Using the James Clerk Maxwell Telescope in Hawaii, the world's best highfrequency radio telescope, McCutcheon measured radiowave emissions from carbon monoxide (CO) molecules deep in the Lagoon Nebula. The CO emission line (registering a temperature of 130 degrees Kelvin) is the strongest measured in 20 years and the second strongest CO line yet found in the sky.

McCutcheon says the find is tantamount to an astronomer, previously aware with the naked eye of only the sun and faint stars, suddenly noticing something new in the sky as bright as the moon.

The research group's discovery, however, is invisible to the human eye and high-powered optical instruments like



like one light-year, or nearly 10 million million kilometres.

had formed in this nebula and from optical photos and infrared data we guessed that there had to be a lot of energy stored in the region."

For six, eight-hour nights, the researchers focused the Maxwell telescope on the region and tuned it to receive high frequency radio waves from CO molecules. Later analysis of the spectral data showed that roughly halfway through the mapping exercise. CO readings climbed four to six times the intensity level normally measured in our galaxy.

"We expected to detect carbon monoxide lines of maybe 20 to 30 Kelvins but detecting a line this hot was a total surprise," says McCutcheon. "The signal tells us that CO molecules embedded in the hydrogen core are colliding with dust and radiating tremendous energy."

Radio telescope data indicate that as the region collapses, narrow jets of gas molecules are being expelled at rates of many tens of kilometres a second. Eventually, as the gas cloud continues to collapse, energy from radiation and the jets will disperse surrounding gas and dust material leaving the newly formed

# Financial Post dubs UBC prof leader in education

Peter Frost, a professor of Industrial Relations Management in UBC's Faculty of Commerce and Business Administration, has won the first Leaders in Management Education award for the Western Canada region.

The award, sponsored by *The Financial Post* and Bell Canada, was given in recognition of Frost's contribution to management education. An award recipient was named in each of four geographic regions — Atlantic Canada, Quebec, Ontario, and Western Canada.

"The award reflects well on the Faculty of Commerce and Business Administration as a leader in business education, "said Frost, who is the Edgar F. Kaiser Professor of Organizational Behaviour. "My success is directly related to a faculty that recognizes innovation and change as essential in keeping pace with. or staying ahead of, changes in the Canadian and international business communities."

Frost has been praised by his colleagues, students and members of the business community for his innovative teaching and his role as one of seven faculty members teaching the core component of the new MBA program.

Dean Michael Goldberg said Frost was among the first to use video technology as an instructional tool in the classroom in the early 1970s. He used video to record and play back student presentations, and presented video vignettes in which actors depicted ineffectual and then more appropriate behaviours.

In 1991 he published *Management Live: The Video Book*, a series of videos that build on traditional textbook and lecture treatments of management and bring to life the concepts of organizational life. He is known for his series of "Reality" books, created with two colleagues and widely used in North America, bridging theory and practice in organizations.

Frost has played a major role in faculty development, hosting workshops on teaching and developing courses to teach PhD students how to teach in business schools. He is currently editing a set of original research papers on teaching effectiveness to be published in the Academy of Management Journal, one of the leading research journals in his field. He has twice received the faculty's Talking Stick Award for Pedagogical Innovation as well as Commerce graduate and undergraduate societies' awards for teaching excellence, a 3M Canada Teaching Excellence Fellowship, a Council for Advancement and Support of Education (CASE) Canada Professor of the Year Award and numerous other awards. Frost was judged based on five criteria: teaching excellence, pedagogical leadership, academic and professional leadership, contributions to management practice and applied research. Of the winners the Financial Post wrote: "You may not know them by name, yet their ability to inspire future generations of business people — and thus, influence business — is profound as they shape the minds of students at Canada's management schools."

the Hubble telescope.

"These molecules we are detecting don't emit light," says Prof. McCutcheon. of the Dept. of Physics and Astronomy. "So in order to study the earliest stages of star evolution, we analyze radio emissions from various molecules."

He explains that new stars begin to form when invisible clouds of dust and hydrogen atoms are somehow compressed to the point where hydrogen atoms turn to hydrogen molecules, undetectable at radio wavelengths. However, this transformation also gives rise to carbon monoxide molecules which do emit radio wavelengths and which act as red flags to astronomers looking for newborn stars; generally speaking, the hotter the CO signal, the more massive and hot the newly forming star.

The star or stars forming in the Lagoon Nebula are buried in a dense clump of gas weighing more than 30 times the mass of our sun with a diameter of about McCutcheon says the young star, or "protostar," scanned by the Maxwell telescope probably won't emerge from its cocoon and be a visible point of light for another million years.

Based on their CO observations, McCutcheon and colleagues expect this star-forming region to produce something much bigger than our sun. The brightest and hottest stars can have temperatures up to 100,000 degrees Kelvin at the surface while our sun measures just 6,000 degrees Kelvin.

McCutcheon is part of an international collaboration which is mapping a region of the Lagoon Nebula containing invisible dense cores of hydrogen molecules. The region is shrouded in a visible glow from energy emanating from the nearby hot star Herschel 36 and other mature stars whose radiation excites the gas around them.

Says McCutcheon, "We knew stars

star as a single point of light.

Canada is a partner in funding the James Clerk Maxwell Telescope along with Britain and the Netherlands. The international team's delicate mapping exercise was made possible by the telescope's large, 15-metre diameter, its ability to operate at sub-millimetre wavelengths and a highly sensitive receiver constructed in laboratories of the National Research Council (NRC) of Canada. These three attributes enabled McCutcheon and colleagues to map a large area of space with high resolution in a relatively short period of time.

Individual researchers working with the telescope are supported by grants from the Natural Sciences and Engineering Research Council (NSERC). McCutcheon began the project 10 months ago with NRC scientist Henry Matthews, and Glenn White and Nick Tothill from Queen Mary and Westfield College, London University.



# Calendar

# March 9 through March 22

#### Sunday, Mar. 9

#### **Green College Fine Arts**

**Speaker Series** Envisioning History's Greatest Garden In 3-D Computer Graphics. David Botta, Artist. Green College, 5:30pm. Call 822-6067.

#### **Green College Performing Arts Group**

An Evening Of Classical Persian Music. Amir Kushkani and company. Green College piano lounge, 8pm. Call 822-6067.

#### Monday, Mar. 10

## **Biotechnology Seminar**

Plant Lipids: Redirecting Metabolism For Fun And Profit. Vic C. Knauf, Calgene Inc. IRC#6, 12:30-1:30. Refreshments before seminar. Call 822-4838.

#### **President's Advisory Committee on Lectures**

Ethnicity And Nationalism In Contemporary Europe. Richard Swartz, author and East Central European journalist. Buchanan penthouse, 12:30-2:30pm. Call 822-6403.

#### **Faculty Development** Seminar

Helping The Harassed - Practical Skills For Third Parties. Margaretha Hoek. David Lam basement, Faculty Development Seminar room (use outside entrance behind Trekkers,) 2:30-5pm. For registra-tion call 822-9149.

#### **President's Advisory Committee on Lectures**

The Suicide Experiment: Hervé Guibert's AIDS Video 'La Pudeur ou l'Impudeur'. Ross Chambers, U of Michigan. Green College, 3:30pm. Call 822-6067/822-4004

#### Library Opening

Walter C. Koerner Library. Koerner Library Plaza (outside), 3:30-4:15pm. Čall 822-3310.

#### **Mechanical Engineering** Seminar

A Reconfigurable Computer Control System For Machines And Processors. Yusuf Altintas, Mechanical Engineering. CEME 1204, 3:30-4:30pm. Refresh-ments. Call 822-3904.

#### **Physics and Astronomy:** Astronomy Seminar

Galaxy Chemical Enrichment By Starbursts. Jean-Rene Roy, Laval U. Hennings 318, 4pm. Refresh-ments at 3:30pm. Call 822-2802.

#### **Modern European Studies** Colloquium

The European Union And The

#### **Zoology** Comparative **Physiology Seminar**

Axon Guidance By Diffusible Attractants And Repellants. Marc Lavigne, UCSF. Tessier BioSciences 2449, 4:30pm. Refreshments. Call 822-2131.

### **Resident Speaker Series**

Law School Admissions In Canada: The Politics Of Decision Making. Dawna Tong, Sociology. Green College, 5:30pm. Call 822-6067.

#### The Brenda and David **McLean** Lectures in **Canadian Studies**

Giddy Limits: Canadian Studies And Other Metaphors. William H. New, English. Green College, 7:30pm. Call 822-6067.

#### Tuesday, Mar. 11

#### Symposium

The Role Of The Great Library In The Life Of The University. President David Strangway; Prof. John Gilbert, Chair, Senate Library Committee; Dean Shirley Neuman, Arts. Main Library Ridington Room, 12-1:20pm. Refreshments. Call 822-4430.

#### Lecture

Humanism And Civil Rights. Kav Stockholder, B.C. Civil Liberties Association. Buchanan D-205, 12:30pm. Call 221-8114.

#### **Cecil and Ida Green Visiting Professor Seminar**

The Taste Of A Man (1997). Slavenka Drakulic, Croatian journalist/author. Buchanan A-102, 12:30pm. Call 822-5675.

#### **Pharmaceutical Sciences** Seminar

Post Pharm. D. Programs In Canada: Results Of 1996 National Survey. Prof. P. Jewesson, Pharmaceutical Sciences. IRC#3, 12:30-1:30pm. Call 822-4645.

#### **Botany/Biodiversity Research Seminar**

Modelling Growth Patterns In Foraging Clonal Plants. Clive Welham, Botany. BioSciences 2000, 12:30-1:30pm. Call 822-2133.

#### Lectures in Modern Chemistry

Mass-Selected Clusters, Cluster-Assembled Materials And Nanostructures. Prof. Martin Moskovits, U of Toronto. Chemistry B-250 (south wing), 1pm. Refreshments, 12:40pm. Call 822-3266.

#### **Biomedical Research** Seminar

Understanding How An Enzyme Works Using Total Chemical Synthesis And Mass Spectrometry. Michael Fitzgerald, Scripps Research Institute. BioMed Research Centre seminar room, 3-4pm. Call Philosophy. Green College, 5:30pm. Reception in Graham House 4:45-5:30pm. Call 822-6067.

#### The Brenda and David **McLean Lectures in Canadian Studies**

The Edge Of Everything: Canadian Culture And The Border Field. William H. New, English. Green College, 7:30pm. Call 822-6067.

#### **Child Care Meeting**

To Discuss New Child Care Programs. Child Study Centre, 2881 Acadia Road, activity room. 7:45pm. Please RSVP to 822-5343.

#### Wednesday, Mar. 12

**Orthopedics Grand Rounds** Dr. Peter O'Brien, Orthopedic Trauma, Orthopedics. Vancouver Hospital/HSC Eye Care Centre Auditorium, 7am. Call 875-4646.

#### **Creative Writing Masters'** Series

Poets. Zoe Landale, Jane Munro. Buchanan E-474, 12:30-1:30pm. Call 822-2712.

#### **President's Advisory**

**Committee on Lectures** Richard Swartz, author and journalist. Buchanan penthouse, 12:30-2:30pm. Call 822-6403.

#### **Noon Hour Concert**

Ross Taggart Trio, jazz. Music Recital Hall, 12:30pm. \$3. Call 822-5574.

#### **Obstetrics Research Division** Seminar

Experimental Progress In Xenotransplantation. Dr. Joseph Tai, Pathology. BC Women's Hospital/Health Centre 2-N35, 2pm. Call 875-3108

#### Lecture

Is Belief In God Rational? Prof. Alvin Plantinga, U of Notre Dame. Scarfe 100, 4pm. Call 822-3112.

#### **Ecology/Biodiversity Research Seminar**

Spatial And Temporal Scales Of Community Responses To Disturbance. Bill Neill, Zoology, Family/ Nutritional Sciences 60, 4:30pm. Refreshments in Hut B-8, 4:10pm. Call 822-3957.

#### **Respiratory Research** Seminar

Update: Developments In Leukotriene Antagonist Research. Dr. lan Rodger, Mcmaster U. Vancouver Hospital/HSC, 2775 Heather St. 3rd floor conference room, 5-6pm. Call 875-5653.

#### **Cultural and Media Studies** Interdisciplinary Group

Fear And The News Media. Prof. David Altheide, Arizona State U. College, 5:30pm. Call 822Theatre, 8pm. Tickets \$8-\$14. Refreshments. 2 for 1 preview March 12. Continues to March 22. Call 822-2678.

#### **Cecil and Ida Green Visiting Professor/Special Vancouver Institute Lecture**

Words And Bullets: A Writer And The War. Slavenka Drakulic, Journalist. IRC#2, 8:15pm. Call 822-5675.

#### Thursday, Mar. 13

#### **Koerner Library Tours**

Koerner Library 3rd floor lobby. every half hour between 10am-12noon and 2-4pm. Also March 14, 15. Call 822-3858.

#### Arts One/Science One Seminar

Feminism, Pornography And The Criminal Code (Or Just How Democratic Can We Be?) Prof. Emerita Kay Stockholder. IRC#6, 12:30-1:20pm. Call 822-9876.

#### **Biotechnology Seminar**

Origins And Functions Of The Chlamydial Inclusion In Host Cells. Dr. Ted Hackstadt, Rocky Mountain Laboratory. IRC#1, 12:30pm. Refreshments before seminar. Call 822-2210.

#### Anthropology and Sociology Seminar

Bread N' Butter: Gendering Processes In White Collar And Professional Occupations. Gillian Creese, Fiona Kay. ANSO 205, 12:30-1:30pm. Call 822-6683.

#### Earth/Ocean Sciences Seminar

Ocean/Atmosphere Variability And Biogeochemical Cycles: Stable Isotope Geochemistry Of Marine Deposits. Steve Calvert. GeoSciences 330A, 12:30pm. Call 822-3466/822-2267.

#### **Botany Seminar**

Flavonoids As Indicators Of Evolution In The Hawaiian Flora. Ji Yong Yang, MSc candidate. BioSciences 2000, 12:30-1:30pm. Call 822-2133.

#### **Multimedia Seminar**

Web-based Law Course And Pharmacy CAI Modules. Christine Boyle and Marilyn MacCrimmon, Law. Simon Albon, Pharmaceutical Sciences. Media Services Telecentre, 1-2pm. Call 822-1851.

#### Arts One/Science One Seminar

Philosophical Dimensions Of The Problem Of Unintended Consequences. Led by Joe Naylor, Lec-turer, Arts One Program. IRC#6, 1:30-2:15pm. Call 822-9876.

#### **Wood Science Seminar**

Paper And The Electronic Age:

1:30pm. Call 822-1833.

#### **Physics Colloquium**

Biological Motors. San Xiang, Radiology. Hebb theatre, 4pm. Refreshments, 3:45pm. Call 822-3853.

#### CICSR Distinguished Lecture Series

Interactive Simulation And Physically Based Animation. Prof. Andrew Witkin, Carnegie Mellon U. CICSR/CS 208, 4-5:30pm. Refreshments. Call 822-6894.

#### **Genetics Graduate Program** Seminar

The Role Of CD45 And Its Phosphatase Activity In T Cell Signalling Events. Pauline Johnson, Microbiology. Wesbrook 201, 4:30pm. Refreshments, 4:15pm. Call 822-8764.

#### World History Speaker Series Seminar

The World System Perspective In The Construction Of Economic History. Prof. Janet Lippman Abu-Lughod, New School for Social Research. Buchanan Tower 1206/07, 4:30-6pm. Call 822-2561

Law and Society Seminar

Governing Pregnancy: The So-

cial Fetus As Textual Assemblage.

Lorna Weir, York U. Green Col-

**Poetic Persuasions** 

Readings Of Original, Creative

Works. Green College, 8pm. Call

Health Care and

**Epidemiology Rounds** 

Economic Impact Of HIV/AIDS

Dr. Robin Hanvelt. Mather 253,

A Celebration of Courage

Performance Presentations And

Poetry Readings Promoting Cul-

tural Partnerships Between

Women In Honour Of Interna-tional Women's Day. Interna-tional House, 1783 West Mall,

12-3pm. Registration, call 822-

World History Speaker

Series Lecture

Global History: The World Sys-

tem In The Thirteenth Century.

Prof. Janet Lippman Abu-

Lughod, New School for Social

Research. Buchanan A-202,

**Cecil and Ida Green Visiting** 

Professor

Individual Guilt And Collective

Responsibility: Ordinary People

And The War. Slavenka Drakulic,

Croatian journalist/author.

12:20-1:30pm. Call 822-2561.

lege, 5pm. Call 822-6067.

Friday, Mar. 14

9-10am. Call 822-2772.

822-6067.

2415.

Environment - Centralization And Fragmentation. Jutta Brunnee, Law. Buchanan Penthouse, 3:30-5pm. Call 822-5969.

#### Biochemistry/Molecular **Biology Discussion Group** Seminar

Molecular Mechanisms Of Self/ Nonself Recognition In Fungi. Louise Glass, Botany. IRC#4, 3:45pm. Refreshments at 3:30pm. Call 822-3341.

#### **Centre for Applied Ethics** Colloquium

Rational Cooperation, Intention And Reconsideration. Joe Mintoff. U of Newcastle. Angus 307, 4-6pm. Call 822-5139.

#### **Mechanical Engineering** Lecture

An Evolutionary Argument Against Naturalism. Prof. Alvin Plantinga, U of Notre Dame. Scarfe 100, 4pm. Call 822-3112.

822-7810

#### **Statistics Seminar**

Inference For Complex Computer Codes With Different Levels Of Complexity. Prof. A. O'Hagan, Mathematics, Nottingham U. CSCI 301, 4-5:30pm. Refreshments. Call 822-0570.

#### Lecture

Pluralism: A Defense Of Religious Exclusivism. Prof. Alvin Plantinga, U of Notre Dame. Scarfe 100, 4pm. Call 822-3112.

#### **Medical Genetics Seminar**

Towards A Function For The Human And Murine PLA2-Like Gene. Paul Kowalski, Ph.D student. Sequencing BssHII Sites On Human Chromosome 8. Leah Debella, MSc candidate. Wesbrook 201. 4:30-5:30pm. Refreshments, 4pm. Call 822-5312.

Green College Speaker Series Time And Being. Steven Savitt,

6067.

#### Anthropology and Sociology Seminar

The State Of Child And Family Health Worldwide. Dr. Michael Seear, Mather 112, 5:30pm. Call 224-3787.

#### **Networking Skills**

Networking Skills For Recent Graduates And Students. Blair Grabinsky, Career Services. Cecil Green Park House main floor. 7-9pm. \$2. Light refreshments/cash bar. Call 822-8917.

#### The Brenda and David McLean Lecture

The Centre Of Somewhere Else: The Pig War And English 91. William H. New, English. Green College, 7:30pm. Call 822-6067.

#### Theatre

Molière's Shorts. Three One-Act Plays By Molière. Frederic Wood

104, 12:30pm. Cal Revolution: Wright, PAPRICAN. MacLeod 214, 822-5675.



#### CALENDAR POLICY AND DEADLINES

The UBC Reports Calendar lists university-related or university-sponsored events on campus and off campus within the Lower Mainland.

Calendar items must be submitted on forms available from the UBC Public Affairs Office, 310-6251 Cecil Green Park Road, Vancouver B.C., V6T 1Z1. Phone: 822-3131. Fax: 822-2684. An electronic form is available on the UBC Reports Web page at http://www.ubc.ca under 'News.' Please limit to 35 words. Submissions for the Calendar's Notices section may be limited due to space.

Deadline for the March 20 issue of UBC Reports which covers the period March 23 to April 5 - is noon. March 11.

# Calendar

# March 9 through March 22

#### **Occupational Hygiene** Program Seminar

Developing An Emergency Response Program. Heather Lyle, Emergency Planner, City of Vancouver. Vancouver Hospital/HSC Koerner pavilion G-279. 12:30-1:30pm. Call 822-9595.

#### Run/Walk

Koerner Library Run/Walk. Run starts at SUB; Walk starts at Main Library, 12:40pm. Call 822-3310.

#### **Political Science Seminar**

Elections To The European Parliament: Do They Have Anything To Do With Europe? Alan Siaroff. Graduate Student Centre 201, 3-4:30pm. Call 822-5456.

#### **Geography** Colloquium Series

Environmental Degradation And Urban Development: Issues In The Lower Fraser Basin. Neil Guppy, Sociology; Peter Urmetzer and Don Blake, Political Science. Geography 229, 3:30pm. Call 822-2663.

#### Linguistics Colloquium

Phonology. Donca Steriade, UCLA. Buchanan Penthouse, 3:30pm. Refreshments. Call 822-5594.

#### **Chemical Engineering** Weekly Seminar

The Effect Of Oxygen On Synthetic Crude Oil Fouling. Balamurali Navaneetha-Sundaram, MSc candidate. ChemEng 206, 3:30pm. Call 822-3238.

#### Theoretical Chemistry Seminar

The Interaction Of Two Surfaces In An Electrolyte Solution. F. Otto, Chemistry. Chemistry D-402 (centre block), 4pm. Call 822-3266.

#### Saturday, Mar. 15

#### **Continuing Studies** Workshop

Introduction To The Internet: Level 1. Jonn Martell. David Lam, Microcomputer Lab A, 9am-1pm. \$100. Call 822-1420.

#### **Continuing Studies** Seminar

Getting Started With Electronic Commerce. William Koty, Continuing Studies. David Lam seminar room, 9:30am-1pm. \$100. Call 822-1420.

#### Green College Performing Arts Group

Piano Recital, Kiyoko Tanaka. Green College, 7pm. Call 822-6067.

The Vancouver Institute A Pack Of Lies: The Truth About Cigarette Advertising. Prof. Ri chard Pollay, Commerce and Business Administration. IRC#2, 8:15pm. Call 822-4636.

lounge. Performances, lecture and slide presentation on Asian foods, cooking demonstrations, 1:30-2pm. Call 822-2629.

#### **Modern European Studies** Colloquium Series

Inter-Cultural Receptivity: The Case Of Polish And Russian Literatures. Bozena Karwowska, Slavic Studies, Hispanic and Italian Studies. Buchanan Penthouse, 3:30-5pm. Call 822-5969.

#### **Biochemistry/Molecular Biology Discussion Group** Seminar

Role Of Second Messengers And Protein Kinases In Activity Dependent Plasticity Of Neurons. John Lisman, Brandeis U. IRC#4, 3:45pm. Refreshments at 3:30pm. Call 822-0705.

#### **Mechanical Engineering** Seminar

Use Of Flexible Logic In Process Control. Clarence de Silva. CEME 1204, 3:30-4:30pm. Refreshments. Call 822-3904.

#### **Physics and Astronomy:** Astronomy Seminar

Dark Matter Candidates. Kim Griest, U of California-San Diego. Hennings 318, 4pm. Refresh-ments. Call 822-2802.

#### Zoology/Comparative **Physiology Seminar**

Snake Red Blood Cells: From Animal Physiology To ATP Compartmentalisation. Rolf Rolf Ingermann, U of Idaho. BioSciences 2449, 4:30pm. Refreshments. Call 822-2310.

#### **Resident Speaker Series**

The Risk Of Natural Disasters. Andrew Frederiksen, Earth and Ocean Sciences. Green College, 5:30pm. Call 822-6067.

#### Green College Science and Society Lecture

On Measurement. Theodore Porter, History, UCLA. Green College, 8pm. Call 822-3009.

#### Tuesday, Mar. 18

#### **Pharmaceutical Sciences** Seminar

Effects Of Drugs. Substances Of Abuse And Environmental Toxicants On The Developing Fe-tus. Dr. Harpal S. Buttat, Bureau of Drug Research, Ottawa. IRC#3, 12:30-1:30pm. Call 822-4645.

#### **Botany Seminar**

Studies In The Abstract Properties Of Individuals. I. Emergence In Grass Inflorescences. Jack Maze. BioSciences 2000, 12:30-1:30pm. Call 822-2133.

Entropy Sampling. Prof. Jon Lee, Mathematics, U of Kentucky. CSCI 301, 4-5:30pm. Refreshments. Call 822-0570.

#### **Medical Genetics Seminar**

Lipoprotein Lipase: Association With Dyslipidemia And Coronary Artery Disease. Eric Gagne, PhD candidate. Concordance Between Prenatal Diagnosis And Fetal Autopsy Diagnosis. Tod MacPherson, MSc candidate. Wesbrook 201, 4:30-5:30pm. Refreshments at 4pm. Call 822-5312.

#### Green College Speaker Series

The Future Of The Humanities In Canada. Prof. J.M. Bumsted, U Manitoba. Green College, 5:30pm. Reception, Graham House 4:45-5:30pm. Call 822-6067.

#### **Continuing Studies Seminar**

Spies Amongst Us: How To Protect Your Privacy On The Internet. Jack Chakhalian, Science. David Lam Microcomputer Lab B, 6:30-9:30pm. \$85. Call 822-1420.

#### Archaeological Institute Lecture

Ancient Israel And The Sea. Prof. Robert Stieglitz, Rutgers U. MOA, 7:30pm. Call 822-2889.

#### Wednesday, Mar. 19

#### **Orthopedics Grand Rounds**

Congenital Anomalies Of The Cervical Spine And Shoulder Girdle. Dr. Stephen J. Tredwell, Dr. Chris W. Reilly, Dr. Fadi Tarazi, Dr. Joel M. Werier. Vancouver Hospital/ HSC Eye Care Centre Auditorium, 7am. Call 875-4646.

#### **Creative Writing Masters'** Series

Novelists. Dennis Bolen and Eden Robinson. Buchanan E-474, 12:30-1:30pm. Call 822-2712.

#### **Noon Hour Concert**

Lee Duckles, cello; Silvia Fraser, piano. Music Recital Hall, 12:30pm. \$3. Call 822-5574.

#### **Obstetrics and Gynaecology Research Division Seminar** (OBST 506)

Hepatocyte Growth Factor/Scatter Factor And The C-Met Receptor In Human Ovarian Cells. Alice Wong. B.C. Women's Hospital/Health Centre 2-N35, 2pm. Call 875-3108.

#### Biochemistry/Molecular **Biology Seminar**

The Structure Of An Enzyme Responsible For Aminoglycoside Antibiotic Resistance. Albert Berghuis, Biochemistry, McMaster U. IŘC#4, 3:45pm. Call 822-4900.

#### **Centre for Japanese Research Seminar**

morial Road. Call 822-2127.

#### Earth/Ocean Sciences Seminar

Volcanic Debris Flows (lahars): Experience From North And Central America And South-East Asia. Thomas C. Pierson, US Geological Survey. GeoSciences 330-A, 12:30pm. Call 822-3466/822-2267.

#### **Science First! Lecture Series**

Molecular Ships-In-Bottles. John Sherman, Chemistry. IRC#6, 12:30-1:30pm. Refreshments. Call 822-9876.

#### Chinese Research/Faculty of Law Seminar

On The Future Of Human Rights And Responsible Government In Hong Kong. Martin Lee, Member, Legislative Council of Hong Kong. CK Choi 120, 12:30-2pm. Call 822-2629.

#### **Noon Hour Concert**

UBC Chinese Ensemble. Alan Thrasher, director. Music Recital Hall, 12:30pm. Call 822-3113.

#### Anthropology/Sociology **Colloquium Series**

Colonial Texts And Contemporary Contexts: Problems In Interpreting A Settler Memoir. Joanne Fiske. ANSO 205, 12:30-1:30pm, Call 822-2878.

#### **Pharmaceutical Sciences** Seminar

Prophylaxis Of NSAID-Induced Ulcers And H<sub>2</sub> Blockers. David Gardner, PharmD candidate Cunningham 160, 1-2pm. Call 822-4645.

#### **Medieval and Renaissance** Studies

Panel Discussion: Renaissance Studies At UBC: What Is It? What's It Doing? Daniela Boccasini, Italian Studies, French; Tony Dawson, English; Denis Danielson, English; Stephen Guy-Bray, English; Geral Hobbs, Vancouver School of Theology; Rose Marie San Juan, Fine Arts. Green College, 4:30pm. Call 822-6067.

#### **Genetics Graduate Program** Seminar

The Molecular Basis For Substrate Selectivity In Bacterial Pore-Forming Proteins. Robert Hancock, Microbiology. Wesbrook 201, 4:30pm. Refreshments, 4:15pm. Call 822-8764.

#### **Norbert Elias Conference**

A Long Life Considered: Norbert Elias And The Theory Of Civilization. Hermann Korte, U Hamburg. Goethe Institut, 944 W. 8th Ave., 7:15pm. Continues: March 21. Green College, 9am-4pm; March 22, Green College, 10am-1pm. Call 822-5157.

Stuck On The Margins. Mary Lindsay, Consultant. Green College, 8-9:30pm. Call 822-6067/ 822-8660.

#### Friday, Mar. 21

#### Health Care and **Epidemiology Rounds**

Cost Effectiveness Of Breast Cancer Screening. Dr. Charles Wright, Vancouver Hospital/ HSC. Mather 253, 9-10am. Call 822-2772.

#### Germanic/Interdisciplinary **Studies Conference**

Practicing Interdisciplinarity: Norbert Elias Conference On Nurturing Environments For Interdisciplinary Research. Various speakers. Green College, 10am-4:30pm. Continues March 22, MOA theatre, 2-5:30pm. Call 822-4211.

#### **Occupational Hygiene Program Seminar**

The UBC Classroom Hearing Accessibility Study. Susan Kennedy, Murray Hodgson, Van-couver Hospital/HSC, Koerner pavilion G-279, 12:30-1:30pm. Call 822-9595.

#### **Political Science Seminar**

Party, State, And Political Competition In Canada: The Cartel Model Revisited. Lisa Young. Graduate Student Centre 201, 3-4:30pm. Call 822-5456.

#### **Chemical Engineering** Seminar

Measurement Of Ultrasonic Radiation Forces For Particle-Liquid Separations. Steven Woodside, PhD candidate. ChemEng 206, 3:30pm. Call 822-3238.

#### Linguistics Colloquium Syllable Contact In Optimality Theory. Stuart Davis, Indiana U.

Buchanan Penthouse, 3:30pm.

**Theoretical Chemistry** 

Seminar

Coupling Of Relaxation And At-

tachment Of Electrons In CCl<sub>4</sub>/

Inert Gas Mixtures. Ki Leung,

Chemistry. Chemistry D-402 (cen-

tre block), 4pm. Call 822-3266.

Saturday, Mar. 22

**Distinguished Artists** 

Concert

Clark Terry Quintet. Chan Cen-

tre, 8pm. Adult, \$23. Student/

The Vancouver Institute

Lecture

senior, \$12. Call 822-5574.

Refreshments. Call 822-5594.

#### Sunday, Mar. 16

#### **Green College Fine Arts Speaker Series**

David Woolacott, Artist. Green College, 5pm. Call 822-6067.

#### **Green College Performing Arts Group**

Reading Of Green College Resident Colleen Subasic's Thesis Play, "A Brief Case Of Crack-Addicted Cockroaches." Green College, 8pm. Call 822-6067.

#### Monday, Mar. 17

#### Asian Foods and Folkways

Asian Foods And Folkways at the Carpark in the CK Choi building. Street foods will be sold from 11am-1:30pm in the CK Choi

#### Lectures in Modern Chemistry

Single Molecule Reaction Chemistry. Prof. Norm Dovichi, U of Alberta. Chemistry B-250 (south wing), 1pm. Refreshments, 12:40pm. Call 822-3266.

#### Science and Society Workshop

The Meanings Of Measurement. Theodore Porter, UCLA; Brian Wynne, Lancaster U. Green College, 1-5pm. Call 822-3009.

#### Earth and Ocean Sciences -**Oceanography Seminar**

Model (GCM) Simulations Of The Effect Of Prescribed Variations In Sea-Surface Temperatures And Sea-Ice Extent On Atmospheric Variability. Francis Zwiers, Canadian Centre for Climate Modelling and Analysis. BioSciences 1465, 3:30pm. Call 822-1814.

#### Statistics Seminar

Exact Algorithms For Maximum-

Ecological Footprint Analysis Of Japan. Yoshihiko Wada, Community and Regional Planning. CK Choi 120, 12:30-2pm. Call 822-2629.

#### Ecology/Biodiversity **Research Seminar**

Sitting On The Dock Of The Bay ... Watching The California Sea Lions Come In. Hilary Feldman, Zoology. Family/Nutritional Sciences 60, 4:30pm. Refreshments Hut B-8, 4:10pm. Call 822-3957.

#### Senate

The Seventh Regular Meeting Of Senate, UBC's Academic Parliament. Curtis 102, 8pm. Call 822-2951.

#### Thursday, Mar. 20

#### **Board of Governors Meeting**

The Open Session Begins at 8am. Fifteen tickets are available on a firstcome, first-served basis on application to the board secretary at least 24 hours before each meeting. OAB Board and Senate room, 6328 Me-

#### Critical Issues in Global Development

Daughters Of Development: Drowning In The Mainstream, or

Reforming Our Tax And Welfare System. Prof. Richard Blundell, University College, London. IRC#2, 8:15pm. Call 822-4636.

# **Notices**

#### Morris and Helen Belkin Art **Gallery** Exhibition

New Art From Cuba: Utopian Territories. Opens Friday, March 21, 8-10pm. March 22 - May 25. Gallery hours: Tuesday - Friday, 10am-5pm; Saturday, 12-5pm. 1825 Main Mall. Call 822-2759.

#### **Grad Student Presentation** Day

Research on Women and Gender takes place May 8, 9am-5pm. Speakers will be graduate students. Please submit one page abstract and brief biography by March 21. Call 822-9173.

#### **Public Meeting To Discuss** New Child Care Program

Advice from the campus community has been sought to assist Child Care Services with the development of programs for space vacated by the Child Study Centre. The public is invited to meet with the Administrator, Child Care Services and the Director, Housing & Conferences, to review feedback and discuss operating options. Time and place: Tuesday, March 11, 7:45pm, in the activity room of the Child Study Centre at 2881 Acadia Road. Please RSVP to 822-5343.

## **Policy and Procedure Handbook**



## Policy #14

# **Response to Threatening Behaviour**

#### Approved February 6, 1997

**RESPONSIBLE:** All Vice Presidents

#### Purpose

UBC strives to provide an environment in which all individuals can work and study without threat to personal safety. This policy outlines UBC's response when an emergency situation, caused by a direct or indirect threat, to personal safety or violence towards any member of the University community, occurs. It also deals with situations that are not emergencies. **but in which personal safety** is a concern. It gives the Personal Security Coordinator the authority to organize an effective response to incidents and cases. It en**sures that senior administr**ators are kept appropriately informed of developments in every case.

#### **Policy**

Members of the University Community who are faced with an urgent situation involving threatening or violent conduct, where there is reasonable belief that the **safety of persons may be threatened**, **should contact the police** immediately. This includes such situations as threats, threatening letters and bomb threats. The University will take steps to remove immediately from campus a person who exhibits violent or threatening behavior. **Individuals may be suspen**ded from the University and barred from the campus on a continuing basis for violent or threatening behavior. The University will pursue appropriate legal and disciplinary measures in such cases. In addition, UBC coordinates responses to non-emergency situations involving personal security through the Personal Security Coordinator.

#### **Procedures**

#### 1. Emergency Situations

When anyone on campus believes a personal security emergency exists, the following procedure is used:

#### Individual(s) threatened

- a) The first priority is your safety and that of the people around you. Lives take precedence over property. Whenever possible, get to a safe location and alert those around you.
- b) Dial 911 to contact the police. Provide your location and complete details of the situation.
- c) Dial 822-6210 to contact the Personal Security Coordinator.

#### **Personal Security Coordinator**

The Personal Security Coordinator ensures that a trained delegate is always available to respond to the emergency phone number when she/he is not available.

- a) Check whether the individual who was exhibiting threatening/violent behavior was removed by RCMP.
- b) Acts as liaison between the RCMP and UBC, and on behalf of the President takes any steps that may be lawfully taken to deal with the emergency, including but not limited to:
  - (i) order the exclusion of all or specified persons from all or any part of the campus;
  - (ii) order the closing of all or any part of the campus or of all or anypart of the building;
  - (iii) order the cessation or curtailment of any University activity.
- c) Once the emergency is defused, convene the Case Team if necessary. If team action is not required, refer the matter as appropriate.
- d) Ensure follow-up on any steps decided by the Case Team, including contacting outside authorities, consulting those affected and keeping them informed of developments in the case, and arranging for any other special measures to protect members of the University Community.
- e) Maintain records of the case.

f) Convene de-briefing sessions and ensure that lessons learned are integrated into protocols and procedures, and conveyed to the President and Vice Presidents.

#### The Case Team

The Case Team is chaired by the Personal Security Coordinator and composed of individuals selected to be on-call for this purpose who have been oriented by the Personal Security Coordinator. Case Team membership is:

- Personal Security Coordinator delegates
- the Director of Campus Security
- a representative from Legal Affairs
- a psychologist trained in dealing with violent/threatening people
- a representative from Human Resources (for staff)
- a representative from the Registrar's Office (for students)
- a representative from the Provost's Office (for faculty)

This group will be augmented as needed by individuals selected for responsibility for faculty, staff and students in the area under threat or other key functions where applicable, such as:

- the Administrative Head of Unit
- the Dean
- Housing and Conferences
- a representative from University Relations
- a representative from Student Health/ Counselling Services/Women Students'Office
- a representative of the Union, AAPS or Faculty Association
- a representative from the RCMP University detachment
- an expert in critical stress debriefing
- and other units as needed.

Those who are requested to participate as members of the team accord such requests the highest priority. The Case Team formulates a recommendation for the President regarding a continuing exclusion from campus if required. If a traumatic incident has occured, the Case Team ensures that any members of the community affected are referred for support, and where appropriate, contacts internal providers of counselling services or the external supplier of the Employee and Family Assistance Plan to arrange for criticial incident stress debriefing services.

#### 2. Non-Emergency Situations

Students and members of faculty and staff who come into contact with individuals on campus who are obviously distressed or who exhibit aggressive behavior that does not in itself constitute an emergency situation, may also consult the Personal Security Coordinator. This includes receiving bomb threats or threatening letters. Experience has shown that an individual in such a state often interacts with more than one department; it is therefore important that the Personal Security Coordinator be informed so that she/he can share the information offer appropriate assistance. This may assist in the prevention of emergency situations in the future.

#### 3. General

The Personal Security Coordinator publishes an annual report describing the general nature of situations dealt with under this policy, to help the University Community gain general awareness of appropriate responses.

The Personal Security Coordinator initiates educational programs to raise awareness about appropriate responses to emergencies.

#### <u>Definitions</u>

A Personal Security Emergency exists when a reasonable person believes that there is an imminent risk to personal safety and that there is a need for immediate intervention.



# **Formal Investigations**

#### Approved: February 6, 1997 RESPONSIBLE: All Vice Presidents Purpose

To provide guidance to University officials who commission formal investigations of situations or incidents at UBC.

#### **Policy**

University officials who consider there to be a need to investigate a situation or incident for which there is no existing policy at UBC seek advice on the terms of reference for the investigation and the appropriate level and nature of the investigation. For situations/incidents involving students and members of faculty, Legal Affairs in the President's Office is consulted. For situations/incidents involving members of staff, the Department of Human Resources is consulted. In all cases, the administrative head of unit

keeps the appropriate dean and vice president informed of investigative activity contemplated or undertaken. Legal Affairs/Human Resources will provide advice and written guidelines as required to heads seeking such advice.

#### **Procedures**

Legal Affairs in the President's Office and the Department of Human Resources provide written guidelines that address issues common to most investigations as well as those identified as uniquely appropriate to the situation. Considerations include:

- single investigator or more than one person
- internal/external investigators
- to whom does the investigator report
- what is to be investigated substance checklist method

- clear and practically doable terms of reference, with advice on fair process, onus, standard of proof and evidence issues
- opportunity for mediation (can the investigation be suspended partway through?)
- access to people personal interviews
   confidentiality
- · access to information
- timing "report out" date; interim progress reports
- resources available to them legal, secretarial, administrative
- format of report sections, use of individuals' names in body of report, recommendation section, release of report to affected persons
- disposition of notes and other documents collected as part of the investigation
- level of thoroughness needed exami-

nation, re-examination, a person's right to know all charges against him/her, characterization of the facts within the report as confirmed or not

- is the end result a recommendation, finding, decision? to whom should it be addressed?
- opportunity for response
- should the report be considered by a committee or individual, nominated by the President or person commissioning the report, to suggest an appropriate course of action before implementation?
- if there is a fee involved, or other compensatory arrangement (such as teaching release), this should be worked out and included in the terms of reference if possible.

#### Definitions

None



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## THE UNIVERSITY OF BRITISH COLUMBIA

## **Policy and Procedure Handbook**

# Policy #85 Scholarly Integrity

#### Approved: January 1995 Revised: February 6, 1997 RESPONSIBLE VICE PRESIDENT Vice President Academic & Provost Vice President Research

#### **Preamble**

The University recognizes that teaching, research, scholarship and creative activ-∎ity are most likely to flourish in a climate of academic freedom. Since the conditions for proper teaching, research, scholarship and creative activity are quite different depending upon the discipline, individual investigators are expected to assume direct responsibility for the intellectual and ethical quality of their work. The university community has always recognized the necessity for maintaining the highest ethical standards in the conduct of scholarly activities. The University of British Columbia has developed this policy to communicate expectations, increase awareness of integrity issues, and encourage scholars (be they students or members of faculty and staff) to assume personal responsibility.

#### Purpose

- to promote scholarly integrity among scholars, in order to maintain and enhance the value of impartiality that universities offer society;
- to proscribe activities which breach generally acceptable standards of scholarly conduct;
- to provide a process for dealing with allegations of scholarly misconduct quickly.

## Policy

UBC is responsible for developing awareness among all students and members of faculty and staff involved in teaching and scholarly activities of the need for the highest standards of integrity, account-

ability and responsibility. UBC holds scholars responsible for scholarly and scientific rigour and integrity in teaching and research, in obtaining, recording and analyzing data and in presenting, reporting and publishing results,

through such means as: • evaluating the work of students in a fair manner;

giving appropriate recognition, including authorship, to those who have made an intellectual contribution to the contents of the publication, and only those people; using unpublished work of other researchers and scholars only with permission and with due acknowledgement; and using archival material in accordance with the rules of the archives • obtaining the permission of the author before using new information, concepts or data originally obtained through access to confidential manuscripts or applications for funds for research or training that may have been seen as a result of processes such as peer review: conforming to UBC standard requirements for working with humans, animals, biohazards, radioisotopes and affecting the environment;

#### of Interest.)

UBC investigates allegations of scholarly misconduct in a timely, impartial and accountable manner and takes appropriate action, including any necessary steps to preserve evidence, when it finds that scholarly misconduct has occurred.

#### **Procedure Summary**

In order to maintain integrity in teaching, research, scholarship and creative activity and to avoid misconduct, members involved in teaching, research, scholarship and professional/creative activity shall in particular:

evaluate the work of students fairly;
recognize and acknowledge the intellectual contribution of others;

 not use new information obtained through access to confidential manuscripts or applications seen as a result of peer review;

 use scholarly and scientific rigour in obtaining, recording and analyzing data and in reporting results;

 ensure that authors of published work include all and only those who have intellectually contributed;

• maintain integrity in using research funds. Acts of scholarly misconduct may be committed with varying degrees of deliberateness. It is recognized that the borderline between *scholarly incompetence*, carelessness and negligence, on the one hand, and intentional dishonesty, on the other, may be very narrow. The result is objectionable in any case, even if different degrees of discipline are appropriate.

Careful supervision of new members of faculty and staff by their supervisors and department heads is in the best interest of the institution, the supervisor, the trainee and the scholarly/scientific community. The complexity of scholarly and scientific methods, the necessity for caution in interpreting possibly ambiguous data, the need for advanced analysis, and the variety of protocols for reporting research data all require an active role for the supervisor in the guidance of new investigators.

Principal and co-investigators who have failed to exercise reasonable care in directing and supervising researchers who have committed academic misconduct share in the blame and should be disciplined accordingly.

A factor in many cases of alleged scholarly/scientific misconduct has been the absence of a complete set of verifiable data. The retention by the University of accurately recorded and retrievable results is of utmost importance. Wherever possible, all primary data should be recorded in clear, adequate, original and chronological form. In scientific departments, a record of the primary data must be maintained in the laboratory and cannot be removed. Original data for a given study should be retained in the unit of origin for at least five years after the work is published or otherwise presented (if the form of the data permits this, and if assurances have not been given that data would be destroyed to assure anonymity). Supervisors and collaborators should have unrestricted access to all data and products of their collaborative research. Entitlement to ownership of primary data, software, and other products of research can vary according to the circumstances under which research is conducted. A shared understanding about ownership should be reached among collaborators, especially between supervisors and their graduate students, before research is undertaken.

All authors listed should have been involved in the research. Each is expected to have made a significant intellectual or practical contribution, understand the significance of the conclusions, and be able to share responsibility for the content and reliability of the reported data. All authors listed should have seen and approved a manuscript before submission. The concept of "honorary authorship" is unacceptable. There should be guidelines developed and discussed within each unit regarding conditions of authorship for research trainees. These guidelines should be discussed with the trainees before the research is begun or they become involved in it.

Research conditions for all involved in a research team should be outlined in a letter from the principal investigator before team members become engaged. Sample letters to colleagues, post doctoral fellows and graduate students about such issues as compensation, supervision, authorship, records of data, ownership and/or use of data, publication rights, and commercialization, are available from Research Services. The Faculty of Graduate Studies sends notices about this requirement to all accepted for graduate studies and their supervisors at the time of admission. These notices and a copy of the letter from the supervisor to the graduate student detailing the terms above are filed in the student file in Graduate Studies.

A gradual diffusion of responsibility for multi-authored or collaborative studies could lead to the publication of papers for which no single author is prepared to take full responsibility. Two safeguards in the publication of accurate reports are the active participation of each co-author in verifying that part of a manuscript that falls within his/her specialty area and the designation of one author who takes responsibility through reasonable care for the validity of the entire manuscript. Formal procedures for the investigation of allegations of scholarly misconduct are essential to assure the protection of the rights of all those involved in the case until the basis of the allegations can be examined and a resolution of the problem can be determined.

### Detailed Procedures

#### Source of Allegation(s)

The initial report of suspected misconduct may come from various sources within or without the University. For example, the allegation may come from an individual member of faculty or staff, a student, a member of the general public, a media report, a group of individuals, an istration of University and outside funds involved in the research; to obtain and retain relevant documentation (eg lab notes, computer disks, hard drives, proof of credentials) related to an investigation; to request that members of the university community appear before an investigative committee and answer its questions or supply materials to it.

#### Allegations Referred to the Vice President Research or the Provost

The Vice President Research or the Provost may choose to refer the matter back to the unit or to dismiss the allegation. If in the judgement of the Vice President Research or the Provost the allegations have sufficient substance to warrant investigation, he/she informs the student(s) and/or employee(s) named in the allegation, in writing. The written notice summarizes the allegation in sufficient detail to allow the individual(s) concerned an opportunity to respond. Responses received are forwarded to the investigative committee if established.

#### Appointment of Investigating Committee

The Vice President Research or the Provost appoints an Investigative Committee consisting of three experienced members, one external to UBC, and all at arms length from both the person(s) alleging misconduct and the person(s) alleged to have misconducted themselves. The terms of reference of the Investigative Committee are to determine if scholarly misconduct has occurred, and if so, its extent and seriousness. The Committee elects one of its members as Chair.

In cases of collaborative research involving other institutions, it may be desirable to conduct either parallel investigations, or a joint investigation, with appropriate changes to the procedures outlined below. Whichever method is chosen, UBC will cooperate fully with other institutions.

#### Investigation within Sixty Days

Due to the sensitive nature of allegations of scholarly misconduct, the inquiry by the Investigative Committee should be completed and a draft report prepared within sixty days of the initial written notification to the respondent(s). In complex cases a full report may not be possible in this time frame, but some assessment must be prepared within three months.

## Considerations for the Investigative Committee

The Committee aims to review all scholarly activity with which the individual has been involved during the period of time considered pertinent in relation to the allegation, including any abstracts, papers or other methods of scholarly communication. A special audit of accounts may also be performed on the sponsored research accounts of the involved individual(s). Individuals may be required to prove credentials.

• using research funds in accordance with the terms and conditions under which those funds were received;

• revealing to the University, journals, sponsors, funding agencies or those requesting opinions, any conflict of interest, financial or other, that might influence their decisions on whether the individual should be asked to review manuscripts or applications, test products or be permitted to undertake work sponsored from outside sources. (See Policy #97, Conflict anonymous source, a granting source or from a University administrator.

#### **Initial Disposition of Allegations**

Allegations of scholarly misconduct received by members of the University community, including administrators, are forwarded to the Vice President Research. The Vice President Research is the central point of contact for receiving allegations, as he/she is normally sufficiently at arm's length so as to be viewed as impartial and free of personal conflicts of interest. If the Vice President Research feels it would be inappropriate to receive a particular complaint for whatever reason, he/she may refer the complaint to the Provost.

#### Authority of the Vice President Research and the Provost

The Vice President Research and the Provost both have the authority: to close down and declare "off limits" facilities used for research; to protect the adminThe Committee has the right to see any University documents and question any students or members of faculty and staff during its investigation.

The Committee ensures that it is cognizant of all real or apparent conflicts of interest on the part of those involved in the inquiry, including both those accused and those making the allegations. It may seek impartial expert opinions, as necessary and appropriate, to ensure the investigation is thorough and authoritative. In the investigation process, the persons alleged to have engaged in misconduct have the right to know all allegations against



## **Policy and Procedure Handbook**

#### them and the right to respond fully.

#### **Review of Draft Report**

The involved individual, any collaborators or supervisor related to the investigation are given reasonable opportunity to review and comment on the draft report.

#### Findings and Recommendations of the Investigative Committee

The Investigative Committee, upon reviewing all the elements in the case, will report on its finding of whether or not scholarly misconduct occurred, and, if so, its extent and seriousness. If the allegations are proven on a balance of probabilities, the Investigative Committee shall also make recommendations in its report on the need to:

- withdraw all pending relevant publications;
- notify editors of publications in which the involved research was reported;
- redefine the status of the involved individuals;
- ensure that the units involved are informed about appropriate practices for promoting the proper conduct of research;
- inform any outside funding agency of the results of the inquiry and of actions to be taken;
- recommend any disciplinary action to be taken.

If the allegations are not substantiated, the Committee may make recommendations in its report on the need for remedies.

#### The Report

The report is addressed to the Vice President Research or Provost, whichever commissioned the investigation, and details the full allegation(s), the investigative steps taken by the committee, including the individuals with whom it communicated and what their evidence was, its findings and any disciplinary or remedial action it is recommending. Recognizing that the report is a public document under British Columbia's Freedom of Information and Protection of Privacy legislation, individual identifiers are removed from the final version of the report and are maintained in a separate schedule that is not publicly accessible.

#### Materials from the Investigation

The Chair of the Committee keeps copies of all materials, records and notes of interviews with individuals involved that in a secure and confidential manner and hands them over to the Vice President Research along with the Committee's report. The report and related records are kept for a period of six years. All requests for access to records will be handled in accordance with the provisions of the B.C. Freedom of Information and Protection of Privacy Act.

#### Report to the Appropriate Administrative Head of Unit within 75 days

The Vice President Research or the Provost forwards the investigative report to the appropriate administrative head of unit within 75 days of commissioning the report. For students, the Administrative Head of Unit with authority to receive and act on the Committee's report is the President; for members of staff, it is the Director or Head of Department; for members of faculty, the authority may be either the President or the Dean/Head, depending on the nature of the discipline contemplated. (The Agreement on Conditions of Appointment states that only the President may discipline a faculty member by dismissal or suspension without pay.) The individual receiving the Committee's report consults with the President, the Provost, the Vice President Research, the Dean, and if appropriate the Head of Department, about its report. In cases where scholarly misconduct is judged to have occurred, the Provost, the Vice President Research, the Dean, the Head and the President will discuss appropriate action based on the nature and seriousness of the misconduct.

#### Decision about Discipline/Remedies

The appropriate head of administrative unit communicates to the parties involved in a timely manner regarding the decision reached in the case in general, and to the parties affected by decisions on discipline/remedies about the outcome particular to them.

#### **Appeal of Discipline**

Discipline imposed for scholarly misconduct may be appealed:

- By Faculty members in the Bargaining Unit: through the grievance procedure outlined in Section 21 of the Agreement on the Framework for Collective Bargaining with the Faculty Association or Section 10 of the Agreement on Conditions of Appointment.
- By Staff Members in Unions: through the grievance procedure established in
- the relevant collective agreements.
- By Management and Professional Staff: through the grievance procedure estab-

lished in the Framework Agreement (yet to be negotiated).

- By Employees not covered above: directly to the President in writing.
- By Students: through the Senate Committee on Student Appeals on Student Discipline.

#### **Protection of Reputation**

When no scholarly misconduct is found, every effort will be made by the Vice President Research and the Provost to protect the reputation of the individual named from undue harm, as well as the reputation of the University. The Vice President Research, Provost, Dean and Head may consult about any remedial steps that need to be taken in the circumstances.

#### **Report to Granting Councils**

Where misconduct is found to have occurred, the investigative report and decision regarding discipline/remedies will be forwarded within thirty days of the decision of the administrative head of unit to any granting council that has funded the research.

#### Good Faith

In all proceedings and subsequent to a final decision, the University will undertake to assure that those making an allegation in good faith and without demonstrably malicious intent are protected from reprisals or harassment. False allegations made purposefully will give lead to discipline for the individual making the allegation by the University.

#### Education

In order to disseminate information about issues this policy is intended to address, the Vice President Research and the Provost publish annually a report summarizing the facts of cases of scholarly misconduct and their disposition. A copy of this report is forwarded to the granting councils.

The Vice President Academic & Provost arranges for training and development about various aspects of scholarly integrity for faculty, staff and students, and reports annually on this activity to the University Community.

#### **Cross-References**

See also, Policy # 87 - Research, Policy #88 - Patents and Licensing, Policy # 97 - Conflict of Interest, Statement on Academic Freedom in UBC Calendar.

#### Definitions

Scholarly misconduct, interpreted in light of practices that are appropriate within scholarly communities, includes:

plagiarism;

- fabrication or falsification of research data;
- conflict of scholarly interest, such as suppressing the publication of the work of another scholar;
- the unfair evaluation of a student's work; failure to obtain approvals for research
- involving animal and human subjects, biohazards, radioisotopes, environmental effects, or to conduct such research in accordance with the protocols prescibed;
- other practices that deviate significantly from those which are acceptable as appropriate within scholarly communities;
- specific definitions or clarifications adopted by a Faculty of any matter in the points above and any other matter specifically defined by a Faculty as misconduct in scholarly activity, in order to ensure proper recognition of the standards appropriate to the scholarly communities within that Faculty, taking into account Codes of Professional Conduct where applicable; but
- "misconduct" does not include any matter involving only an honest difference of opinion, mistake or an honest error of judgment.

At arm's length means not on friendly or familiar terms.

Scholarly Activity includes all activity that were it to be undertaken by a faculty member would be appropriate for inclusion on a curriculum vitae or in an Annual Report to the Head as teaching, scholarship, research or other creative/ professional activity.

*Falsification* means alteration, selective omission or misrepresentation of research data or citations.

Fabrication means inventing or forging of research data or citations.

*Plagiarism* means representing the thoughts, writings or inventions of another as one's own.

*Principal Investigator* means the person who has ultimate responsibility for a research project. In the case of a project funded by an external or internal grant, normally the holder of the grant. In the case of a project that is not funded, the initiator of the project. The principal investigator is usually the supervisor of the research team (which may include other faculty members) and is usually a faculty member.



# **Commercial Enterprises on Campus**

Approved: July 1977 Revised: February 6, 1997 RESPONSIBLE: All Vice Presidents Purpose

To ensure that commercial enterprises on campus conduct their businesses in ways that promote and reinforce the objectives of the University.

#### **Policy**

Commercial undertakings on the University Campus are permitted only with the prior written approval of the Vice President responsible for the area/function in which the commercial undertaking is to take place and through a provision in the lease agreement between UBC and an organization such as the Alma Mater Society or Discovery Parks Inc.

Commercial activities of short duration, in-

cluding the making of films and the staging of events such as rock concerts, also require the prior written approval of the Vice President responsible for the area/function.

The prime consideration for granting approval is the extent to which a commercial enterprise promotes and reinforces the objectives of the University.

All leases, licenses or other agreements that permit commercial enterprises to operate on campus incorporate the condition that the products and services offered meet the needs for products and services of students, staff, faculty and residents at optimum value, with minimal impact on the environment, and are not incompatible with the major purposes of the University.

In addition, any party operating a commercial enterprise on the campus is required to comply with all rules and regulations that the University may establish from time to time.

#### **Procedures**

When a commercial enterprise is author-

ized to operate on the University Campus, a lease, license or agreement between the commercial enterprise and the University is prepared, detailing all arrangements, including time period covered, the insurance required and financial terms.

The Vice President of the area affected ensures that use of the University Campus by any tenant, its agents, customers, employees, invitees, and/or licensees accords with the policies and procedures of the University, in an environment that promotes and reinforces the objectives of the University.

Changes in University rules and regulations affecting commercial enterprises are communicated in writing.

Rules and regulations established for commercial enterprises may not be applicable to those with agreements effective prior to the approval date of this policy: however, all renewals of such agreements will incorporate terms as described above.

#### **Definitions**

University Campus means all locations where the University conducts its teaching, research and service operations. *Commercial enterprise* means any commercially oriented business or organization.

Commercial activities means commercial enterprises of short duration.

*Ethical procedures* refers to those conducted with the highest level of integrity, in full compliance with the law, as well as the relevant policies of the University.

Minimum impacton the environment describes activities that promote the reduction, reuse and recycling of materials and equipment; reduce that use of materials toxic to the environment; and standardize common supplies and equipment where possible.

*Optimum value* means the delivery of the right goods and/or services to the right place, at the right time, and at the right price, with a minimum impact on the environment.

# Forum

# Consuming the Earth: the biophysics of sustainability



#### By William Rees

William Rees is Director of UBC's School of Community and Regional Planning and winner of a 1996 UBC Killam Prize. The following article is the premise of his remarks at the American Association for the Advancement of Science held last month in Seattle.

The underlying premise of this paper is that much of economics is, or should be, human ecology. The economy is that set of activities and relationships by which human beings acquire, process, and distribute the material necessities and wants of life. It therefore includes that subset of activities by which humankind interacts with the rest of the ecosphere. If we were dealing with any other species, these relationships would indisputably fall within the realm of "ecology." To this extent then, economists are arguably human ecologists.

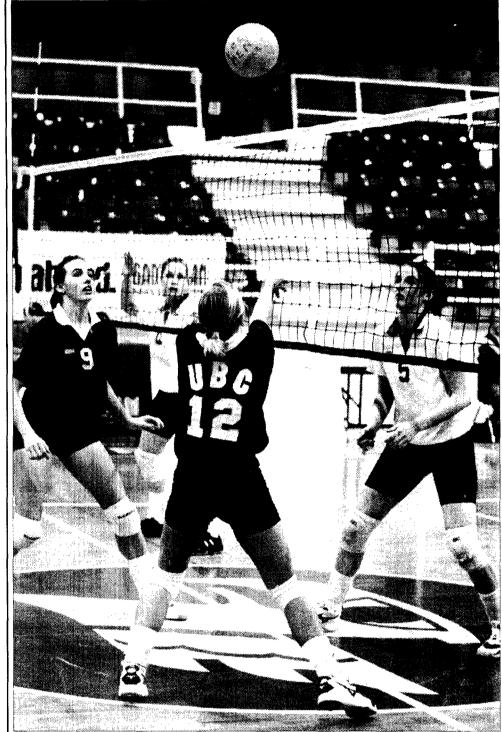
One thing that both economists and ecologists agree upon is that human beings are consumer organisms. In fact, in today's increasingly market-based society people are as likely to be called "consumers" as they are citizens, even when the context is a non-economic one. The designated role of people in the economy is to consume the goods and services produced by businesses, which are the other major component of the economy.

Ecologists would actually refer to humans as macro-consumers. In general, macro-consumers depend on other organisms, either green plants or other animals, which they consume directly to satisfy their metabolic needs. However, a complete human ecology would also have to consider the consumption demands of our manufactured capital. Indeed, the major ecological difference between humans and other species is that in addition to our biological metabolism, the human enterprise is characterized by an industrial metabolism. All our toys and tools, factories and infrastructure, are the external equivalent of organs and, like bodily organs, require continuous flows of energy and material from and to the environment for their production, maintenance, and operation. Economists and ecologists also both see humans as producers. We can only marvel at the enormous quantity of goods and services, both essential and frivolous, that advanced economies have spewed into a willing marketplace. However, there is a fundamental difference

between production in nature and production in the economy. In nature, green plants are the factories. Using the simplest of low-grade inorganic chemicals (mainly water, carbon dioxide and a few mineral nutrients) and an extra-terrestrial source of relatively lowgrade energy-light from the sunplants assemble the high-grade fats. carbohydrates, proteins, and nucleic acids upon which most other life forms and the functioning of the ecosphere are dependent. Because they are essentially self-feeding and use only dispersed (high entropy) substances for their growth and maintenance, green plants are called primary producers.

By contrast, human beings and their economies are strictly secondary producers. The production and maintenance of our bodies and all the products of human factories require enormous inputs of high-grade energy and material resources from the rest of the ecosphere. That is, all production by the human enterprise, from the increase in population to the accumulation of manufactured capital, requires the consumption of a vastly larger quantity of available energy and material first produced by nature. This last point is critical when we consider that people and their economies are part of nature. Indeed, humans have become the maior consumer organism in virtually all the significant ecosystems types on earth-in structural terms, the expanding human enterprise is positioned to consume the ecosphere from within.

Since the beginning of the indusrial revolution, human populations have been growing, material standards have been rising, and increasingly sophisticated methods have been developed for resource extraction and "harvesting." Ever greater quantities of energy and material are used for the manufacture and maintenance of productive capital and for the production of goods and services. On this basis, one might argue a priori that the rate of resource consumption by industrial economies will inevitably come to exceed the rate of production by local ecosystems. In the absence of trade. such economies are fundamentally unsustainable. The global economy is, of course, the aggregate of all the national ones, but in the aggregate can trade with no one. It's not much of a stretch, therefore, to suggest that the present global economy is also fundamentally unsustainable.



D. Thomson photo

Teammates Tanya Pickerell (#9) and Jeannette Guichon set up a play on the way to victory over the Saskatchewan Huskies in Canada West semifinal competition. UBC lost in the finals to the University of Alberta Pandas, but get a second chance to pummel the Pandas March 6-8 at the CIAU championships in Alberta.

# T-Birds volley to face foes in national meet

The UBC Thunderbirds women's volleyball team managed to make its mark on the University of Alberta Pandas' otherwise flawless record this season with a UBC victory on the last game of regular season play.

The T-Birds were unable to duplicate that feat as they fell to the Pandas, twotime defending national champions, in the Canada West University Athletic Association's (CWUAA) championship finals last month. UBC did, however, advance with a wild card berth to play for the national title March 6-8. Last year UBC came away from the CIAU championship with a bronze medal, having entered ranked fifth in the country. This year they go in ranked second in Canada and head coach Doug Reimer is looking for gold. "By losing to Alberta we've given ourselves a tougher road, probably playing York in the first round and Laval in the second round," said Reimer. "Last year we finished third in the country and the two teams ahead of us were Alberta and Laval, so we're seeing the same teams at the top once again. "This year we've developed to the point where we legitimately see ourselves in the medals, and we would like to do better than bronze." Laval, Alberta and UBC face similar changes at the end of this season as each of the three top teams will lose several veteran players. The T-Birds will lose Jeannette Guichon, Tanya Pickerell and

Jenny Rauh, effectively leveling the playing field for some of the other less experienced Canadian teams.

The T-Birds, who have had a brilliant season under Reimer and assistant coach Erminia Russo, finished regular season play 16-2, with their only losses to the Pandas. In turn, UBC managed to spoil a Panda sweep leaving the Pandas with a 17-1 record in the regular season.

UBC beat third-place Saskatchewan Huskies on the way to the Canada West finals last month, but couldn't overpower the Pandas who claimed their third consecutive conference title and their fourth title in five years. Despite its Panda problems, UBC's strength was reflected in the Canada West all-star selections. Joanne Ross and Rauh were named to the Canada West women's all-star team. UBC was well represented in Canada West awards as well with Doug Reimer named women's Coach of the Year and Rookie-of-the-Year honours in the women's division going to Sarah Maxwell. Guichon was selected as the Canada West nominee for the TSN Award which is awarded at the national championship tournament to the player who exhibits the best combination of athleticism, academics and community service. Russo, a UBC graduate and former Olympic team member, replaces Reimer who will take on a new job as Canada's national women's team coach.

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1996 UBC authors by Connie Bagshaw Staff writer

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# Koerner Library home to more than books

UBC LIBRARY

"The library was the part of the university that first attracted me when I came from Europe because I have always loved books. Though my interests have ranged over several aspects of the university. I have always come back to my first love.

I hope the library will continue to grow and prosper. and that this new addition will make more books more available to the university and the community."

- Walter C. Koerner, Nov. 4, 1993

Ill health prevented Walter C. Koerner from attending the site dedication ceremony on Nov. 4. 1993 for the new UBC library that would bear his name.

But the message he sent to be read on that occasion spoke of a dream which becomes a reality on March 10 as the university celebrates the official opening of the Walter C. Koerner Library.

"With the opening of the Walter C. Koerner Library, the services

and resources available to students and the community have dramatically expanded," said UBC President David Strangway.

"In addition to providing desperately needed space for UBC's rich and diverse collec-

tions, this state-of-the-art facility provides on-line access to information from around the globe, a critical link in ensuring that UBC keeps pace with our increasingly knowledge-based world."

Designed by Architectura and Arthur Erickson, the \$24-million building is the first stage of a long-term redevelopment plan for the UBC library system.

## Walter C. Koerner Library facts

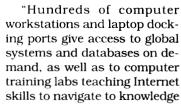
- 17.200 square metres of new and renovated space, comprising seven storeys, designed by award-winning Architectura in collaboration with famed Canadian architect Arthur Erickson
- 800,000 volumes
- more than 17,000 serial publications
  more than 900 study spaces, many
- wired and networked

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Future plans include additional phases which will allow the relocation to the new facility of all materials currently housed in Main Library. the third largest research library in Canada.

UBC's library holdings comprise more than nine million items, ranging in format from rare Babylonian clay tablets to medieval manuscripts. Oriental scrolls, CD-ROMs and an expanding collection of on-line resources.

"This new library is an important investment in promoting further discovery of knowledge." said University Librarian Ruth Patrick.



anywhere in the world."

She added that \$1 million a year will be earmarked for new digital acquisitions.

"Our great friend and donor, Walter Koerner, gave so much to the university and the library," Patrick said. "No name could do more to inspire us as we approach the next millennium."

- student computer lab with 20 networked workstations
  more than 50 on-line public access
- catalogues
- Sedgewick Teaching and Learning Centre with 35 networked workstations
- electronic text and multimedia centre
- film and video area and preview room

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CAROL J., LAWRENCE W. GREEN, C. JAMES

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# On screen, on disk, in print

# Campus pays tribute to its authors March 11

What do lemmings, logging and Leonard Cohen have in common? They were the subjects of books published by UBC authors last year.

"The quality of a university is very much a result of the wide-ranging network of scholarly and professional contacts that faculty members develop and maintain throughout their careers," said University Librarian Ruth Patrick. "Their publications are an essential component of the scholarly endeavour."

The inspiration and creativity of more than 100 UBC authors will be celebrated March 11 at the seventh annual Authors' Reception, hosted by Patrick and UBC President David Strangway.

In addition to books, UBC authors produced musical scores, compact discs and videos in 1996, including Five Canadian Folk Songs—a musical score written by Music Prof. Stephen Chatman—and the television documentary, A Round Peg, featuring Margaret Fulton, UBC's Dean of Women between 1974 and 1977, coproduced by Film Prof. Raymond Hall.

Almost every discipline taught at UBC — from dentistry to fine arts — provided subject material for the 106 titles being showcased but, contrary to common perceptions, not all books written by academics are dour tomes with limited appeal.

One reviewer writing about *Critical Thinking: Understanding and Evaluating Dental Research* by Don Brunette, head of Oral Biology, said: "Who would expect that a book on a dental subject would be fun to read? I am surprised to confess that I leave this unusual volume handy at my easy chair, for continued browsing and pleasure."

History Prof. Robert McDonald was lauded by critics for *Making Vancouver: Class, Status and Social Boundaries, 1863-1913.* 

One review calls his study "an expert analysis of the beginnings of one of the great port cities of the world and one of the more beautiful. *Making Vancouver* is altogether handsomely done and has the hallmarks of a work destined for academic prizes. They would be deserved." Some of the most prestigious publish-

knee. Philadelphia, Lippincott-Raven, 1996. NADEL, IRA. Various positions: a life of Leonard Cohen. New York, Random House, 1996. • NAKAI, SHURYO and H. WAYNE MODLER, eds. Food proteins: properties and characterization. New York, VCH, 1996. • NEW, WILLIAM H., ed. Canadian short fiction: from myth to modern. 2nd ed. Scarborough, Prentice-Hall, 1997. • NEW, WILLIAM H. Science lessons: poems. Lantzville, Oolichan Books, 1996. • O'BRIAN, JOHN, SERGE GUILBAUT and BRUCE BARBER, eds. Voices of fire: art, rage, power, and the state. Toronto, University of Toronto Press, 1996. • OLOMAN, COLIN. Electrochemical processing for the pulp and paper industry. Hants, The Electrochemical Consultancy, 1996. • O'SHAUGHNESSY, MICHAEL V. and MONTANER, JULIO, eds. Therapeutic guidelines for the treatment of HIV/AIDS. Vancouver, St. Paul's Hospital, 1996. • O'SHAUGHNESSY, MICHAEL V., MARTIN T SCHECHTER and JULIO MONTANER, eds. HIV/AIDS research in British Columbia: a ten year retrospective. Vancouver, British Columbia Centre for Excellence in HIV/AIDS, St. Paul's Hospital, 1996. • OUM, TAE HOON, DAVID HENSHER, and JENNY KING, eds. World transport research: proceedings of the 7th World Conference on Transport Research. New York, Pergamon, 1996. • PAULY, DANIEL and PURVOITA MARTOSUBROTO. The fish resources of Western Indonesia. Manila. ICLARM, 1996. PERKINS. ROBERT. How to succeed at organic chemistry. Part A. Delta, Chem-Ed Enterprises, 1996. • PITCHER, TONY J. and PAUL J. B. HART, eds. The impact of species changes in African lakes, London, Chapman & Hall, 1995. • RAMMAGE, LINDA. Vocalizing with ease: a self-improvement guide. Vancouver, L. Rammage, 1996. • RAY, ARTHUR J. I have lived here since the world began: an illustrated history of Canada's native peoples.

ers in the industry represent the UBC authors being celebrated on March 11, including Random House, Cambridge University Press, Oxford University Press, Prentice-Hall and UBC Press which published nine of the works in 1996 as well as six titles by others with university affiliations, including adjunct faculty and emeritii, representing almost half of the books published by UBC Press last year.

McDonald's Making Vancouver and

#### "Who would expect that a book on a dental subject would be fun to read?"

-book reviewer

other books on topics ranging from sustainable development to treaty talks in British Columbia are among the scholarly press's current publications.

"Our choice of areas of publication is based on areas of strength at UBC and areas of interest to British Columbians, meaning that the number of books published from people associated with UBC is a significantly higher proportion of the number of books submitted," said Peter Milroy, director of UBC Press.

"But as the only university press in the province and the major publisher on B.C. topics, we also have a high proportion of authors from other post-secondary institutions in B.C."

UBC Press receives about 250 submissions each year, of which 20 to 25 per cent are from UBC faculty members and researchers associated with the university.

Books published under the UBC Press imprint must be approved by a committee of distinguished scholars appointed by the president. Milroy said. Their task includes reviewing two or more peer evaluations of each manuscript and the responses to the evaluations by the author. The primary criteria guiding the com-

Toronto, Lester Publishing, 1996. • REEDER, KENNETH, JON SHAPIRO, RITA WATSON and HILLEL GOELMAN, eds. Literate apprenticeships: the emergence of language and literacy in the preschool years. Norwood, N. J. Ablex, 1996. • REMNANT, PETER and JONATHAN BENNETT, eds. G. W. Leibniz: new essays on human understanding. Cambridge University Press, 1996. • RICHARDSON, ALAN W. and RONALD N. GIERE, eds. Origins of logical empiricism. Minneapolis, University of Minnesota Press, 1996. • ROBINSON, JOHN B. and ANN DALE, eds. Achieving sustainable development. Vancouver, UBC Press, 1996. • ROBINSON, JOHN B. ed. Life in 2030: exploring a sustainable future for Canada. Vancouver, UBC Press, 1996. • ROCHE, JORG MATTHIAS and MARK JOEL WEBBER. Furund Wider-Spruche: ein integriertes Text-Buch fur Colleges und Universitaten. New Haven. Yale University Press, 1995. • RODMAN, LILITA. Technical communication. 2nd ed. Toronto, Harcourt Brace Canada, 1996. • RUSSELL, MARY, JILL HIGHTOWER and GLORIA GUTMAN, eds. Stopping the violence: changing families, changing futures. British Columba, British Columbia Institute on Family Violence, 1996. • SCALES, ANDREW and MOLLY WISCHHUSEN. Information technology. Oxford, Heinemann, 1996. • SCHECHTER, MAR-TIN T. JULIO MONTANER and MICHAEL V. O'SHAUGHNESSY, eds. HIV/AIDS research in British Columbia: a ten year retrospective. Vancouver, British Columbia Centre for Excellence in HIV/AIDS, St. Paul's Hospital, 1996. • SEEAR, MICHAEL, ed. The pocket pediatrician. Cambridge, Cambridge University Press, 1996. • SHAH, AMIL. Our genetic destiny: understanding the secret of life. Toronto, Hounslow Press, 1996. • SHAPIRO, JERRY and WENDY J. A. **THOMPSON**. Alopecia areata: understanding and coping with hair loss. Baltimore, Johns Hopkins University Press, 1996. • SHAPIRO,



Stephen Forgacs photo

University Librarian Ruth Patrick has her arms full with just some of the books written or edited by UBC authors this past year.

mittee's work is the book's contribution to scholarship, closely followed by an assessment of the author's writing ability, Milroy explained.

Other considerations are the market potential of the work and the availability of resources to publish the book and to offset its deficit.

"We do our best to make these secondary issues but deficits can be taken for granted in the publication of most scholarly books." Milroy said. "Given the shrinking levels of general funding available to us from government, and the changes in the university's direct support to the Press, a book's eligibility for grants has become an increasingly important element in the decision to publish."

UBC Press has not yet been confronted with the growing necessity among university presses to limit their publishing to scholarly books that have commercial potential.

"Just as the traditional role of the university has been to support and encourage a wide range of scholarly research, much of which has no immediate economic application, the role of the uni-

JON, KENNETH REEDER, RITA WATSON and HILLEL GOELMAN, eds. Literate apprenticeships: the emergence of language and lite eracy in the preschool years. Norwood, N. J. Ablex, 1996. • SILVESTER, PETER PEET and RONALD L. FERRARI. Finite elements for electrical engineers. New York, Cambridge University Press, 1996. • SLATER, IAN. WW III: South China Sea. New York, Fawcett Gold Medal, 1996. • SLAYMAKER, OLAV, ed. Geomorphic hazards. Chichester, Wiley, 1996. • SMITH, JOSEPH CARMAN and CARLA FERSTMAN. The castration of Oedipus: feminism, psychoanalysis and the will to power. New York, New York University Press, 1996. • SPLANE, RICHARD B. 75 years of community service to Canada: Canadian Council on Social Development, 1920-1995. Ottawa, The Council, 1996. • STEVENSON, WARREN. Romanticism and the androgynous sublime. Madison, Fairleigh Dickinson University Press, 1996. STUBBS, GORDON, SHEILA A. EGOFF, RALPH ASHLEY and WENDY SUTTON, eds. Only connect: readings on children's literature. Toronto, Oxford University Press, 1996. • SUZUKI, DAVID T. and ANTHONY J. F. **GRIFFITHS** et al. An introduction to genetic analysis. 6th ed. New York, W. H. Freeman, 1996. • SUZUKI, DAVID T. and ANTHONY J. F. GRIFFITHS. Student companion with complete solutions for "An introduction to genetic analysis". 6th ed. New York, W. H. Freeman, 1996. • SUZUKI, DAVID T. and KEOBO OIWA. The Japan we never knew: a journey of discoverv. Toronto: Stoddart, 1996. • SUTTON. WENDY, SHEILA A. EGOFF, GORDON STUBBS and RALPH ASHLEY, eds. Only connect: readings on children's literature. Toronto, Oxford University Press, 1996. • TAKASHIMA. KEN'ICHI and GARY ARBUCKLE. Studies in early Chinese civilization: religion, society, language, and palaeography. 2 vols. Osaka, Kansai Gaidai University Publication, 1996. • TESTA,

versity press has been to ascertain that the written results of that research are confirmed through peer review as being of scholarly merit, presented in readable form consistent with bibliographical conventions, made available to contemporary researchers and preserved for future scholars," Milroy said.

In addition to featuring UBC authors, attracting and publishing works by scholars from other Canadian institutions, and reaching audiences across Canada and internationally is vital to maintaining the value of the UBC Press imprint, Milroy added. He estimated that UBC Press sells approximately 40 per cent of its titles outside of Canada.

On campus, the books are available through UBC Press directly or at the UBC Bookstore.

So, if you're wondering how to succeed at organic chemistry, whether or not lemmings commit suicide or what the finite elements are for electrical engineers, you'll find the answers in books by UBC authors.

CARLO, ed. Poet of civic courage: the films of Francesco Rosi, Trowbridge, Wiltshire, Flicks Books, 1996. • TESTER, FRANK, CHRIS R. MCNIVEN and ROBERT CASE, eds. Critical choices, turbulent times; a companion reader on Canadian social policy reform. Vancouver, UBC School of Social Work, 1996. • THORNE, SALLY E. and VIRGINIA HAYES. Nursing praxis; knowledge and action. Thousand Oaks, Ca., Sage, 1996. • TSURUTA, KINYA and SUKEHIRO HIRAKAWA, eds. "Amae" de bungaku o toku. [Understanding literature by means of "amae"]. Tokyo, Shinyosha, 1996. • TSURUTA, KINYA and SUKEHIRO HIRAKAWA, eds. "An'ya koro" o yamu [Reading An'ya koro]. Tokyo, Shinyosha, 1996. • TSURUTA, KINYA, ed. Shiga Naoya's: A dark night's passing: proceedings of a workshop at the National University of Singapore, December 1994. Singapore, Department of Japanese Studies, National University of Singapore, 1996. • WATSON, RITA, KENNETH REEDER, JON SHAPIRO and HILLEL GOELMAN, eds. Literate apprenticeships: the emergence of language and literacy in the preschool years. Norwood, N. J. Ablex, • WHITE, JAMES M. and KLEIN, DAVID M. Family theories: an introduction. Thousand Oaks, Ca., Sage Publications, 1996. • WHITTAKER, ELVI, MARTHA VON ROSEN and JURGEN VON ROSEN. A Baltic odyssey: war and survival. Calgary, University of Calgary Press, 1995. • WILLIAMS, JUDY. High slack: Waddington's gold road and the Bute Inlet Massacre of 1864. Vancouver, New Star Books, 1995. • WONG, PETER K. H. Digital EEG in clinical practice. Philadelphia, Lippincott-Raven, 1996. • ZACHER, MARK W. and BRENT A. SUTTON. Governing global networks: international regimes for transportation and communications. New York, Cambridge University Press, 1996.

## **News Digest**

Graduates of UBC's Creative Writing program will return to campus on four consecutive Wednesdays beginning Feb. 26 for The Masters Series, free public lectures featuring established alumni writing in various genres sharing their experiences.

Magazine editors Sue Dritmanis and Derk Wynand launched the series which also includes children's writers Barbara Nickel and Shirley Stirling on March 5, followed by poets Zoe Landale and Jane Munro on March 12 and novelists Dennis Bolen and Eden Robinson on March 19.

All lectures in The Masters Series are moderated by faculty members of the Creative Writing program and take place from 12:30 to 1:30 p.m. in room E474 of the Buchanan Building, 1866 East Mall. For more information, call the Creative Writing progam office at 822-2712.

#### . . . . .

To celebrate the opening of the new Walter C. Koerner Library, and in recognition of the library's role in the life of the university, UBC will host a symposium on Tuesday, March 11 from noon to 1:20 p.m. in Main Library's Ridington Room.

Presenters are UBC President David Strangway, John Gilbert, chair of the Senate Library Committee and Dean of Arts Shirley Neuman. The English Department Players will follow with selected readings. Light refreshment will be available. For more information, call symposium co-chair Margaret Friesen at 822-4430, fax at 822-3335 or send e-mail to mfriesen@unixg.ubc.ca

The President's Office invites all faculty, staff, and students to submit proposals for disability-related projects to be funded through proceeds from the Coca-Cola cold beverage agreement.

Proposals should include an overview of the project(s), an indication of cost, a description of how it would create a more accessible environment for persons with disabilities and how it would benefit the campus as a whole.

Send proposals to the UBC Business Relations Office, Room 201, Old Administration Building, Zone 2 before April 11, 1997.

For more information, please e-mail Debora Sweeney, UBC Business Relations at debora.sweeney@ubc.ca.

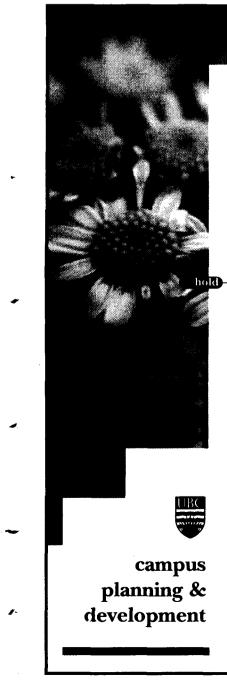
The first projects to be funded through Coca-Cola proceeds will be announced May 22. Further calls for funding proposals will be issued biannually.

## Alan Donald, Ph.D. **Biostatistical** Consultant

Medicine, dentistry, biosciences, aquaculture

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264 -9918



## UBC DEVELOPMENT APPLICATIONS

Students, faculty, staff and members of the public-Does this affect you? The following projects for the UBC Campus are currently being considered. You are encouraged to give us your opinions on these projects:

#### PLANS & PERMIT REVIEWS IN PROGRESS

donald@portal.ca

- Official Community Plan for part of Electoral Area 'A' November, 1996
- Liu Centre for International Studies
- St. John's College—Phases 2 & 3
- Creative Arts—Phase 2

FOR YOUR INFORMATION...

# Classified

The classified advertising rate is \$16.50 for 35 words or less. Each additional word is 50 cents. Rate includes GST. Ads must be submitted in writing 10 days before publication date to the UBC Public Affairs Office, 310 - 6251 Cecil Green Park Road, Vancouver B.C., V6T 1Z1, accompanied by payment in cash, cheque (made out to UBC Reports) or internal requisition. Advertising enquiries: 822-3131.

The deadline for the March 20, 1997 issue of UBC Reports is noon, March 11.

#### Accommodation

POINT GREY GUEST HOUSE A perfect spot to reserve accommodation for guest lecturers or other university members who visit throughout the year. Close to UBC and other Vancouver attractions, a tasteful representation of our city and of UBC. 4103 W. 10th Ave., Vancouver. BC. V6R 2H2. Phone or fax (604)222-4104.

TINA'S GUEST HOUSE Elegant accom. in Pt. Grey area. Minutes to UBC. On main bus routes. Close to shops and restaurants. Inc. TV, tea and coffee making, private phone/ fridge. Weekly rates available. Tel: 222-3461. Fax:222-9279.

GREEN COLLEGE GUEST HOUSE. Five suites available for academic visitors to UBC only. Guests dine with residents and enjoy college life. Daily rate \$50, plus \$13/day for meals Sun.-Thurs. Call 822-8660 for more information and availability.

SHORT-TERM ACCOMMODATION daily, weekly or monthly rate until mid-June. Very reasonable rates. comfortable queen beds, quiet, kitchen and laundry facilities. 5 blocks from UBC. Very close to bus. Call Douglas at 222-8073.

FURNISHED 3 BEDROOM HOUSE available mid-April to June 30, Dunbar area - view, 15 mins UBC, downtown, airport, no pets, \$1590/month. Phone 738-2496.

Accommodation

PENNY FARTHING INN 2855 West 6th. Heritage House, antiques, wood floors, original stained glass. Ten minutes UBC and downtown. Two blocks from restaurants, buses. Scrumptious full breakfasts. Entertaining cats. Views. Phones in rooms. Call (604)739-9002. E-mail:farthing@uniserve.com.

FURNISHED BASEMENT SUITE FOR RENT at 18th and Dunbar with shared kitchen and bathroom facilities. Daily, weekly or monthly at reasonable rates. Call after 5pm, 731-3876.

BRIGHT ATTRACTIVE ONE BR APARTMENT close to UBC, with patio and one affectionate cat. Fully furnished and equipped. Available from mid-June for two months, possibly longer. \$800/ month. Please call 228-8825.

SPACIOUS 1 BR FURNISHED BSMT. SUITE. Cosy knotty cedar living room. Private entrance. Quiet. South Granville location. Near buses or parking. Available. NS, ND. No pets. Incl. util. and laundry. \$700/month. 261-7153.

#### **Housing Wanted**

YALE UNIVERSITY PROFESSOR will be spending summer months collaborating with UBC colleague. Seeksinexpensive housing or housesitting arrangement (willing to take responsibility for dogs or cats). Contactsheila.woody@yale.eduor (203) 432-2517.

SEMI-RETIRED MEDICAL EDUCATOR, frequent flyer, seeks permanent 1 BR suite, furnished or not, near UBC by August 1. Please leave message at 222-9148.

#### **Housing Wanted**

UBC PROFESSOR REQUIRES SUMMER accommodation for visiting, retired, non-smoking parents, for three to six weeks during the period of June through August (dates flexible). Will consider house-sitting. Contact Dr. Reiner, 875-4011 or by e-mail: ethan@unixg.ubc.ca.

#### Services

UBC FACULTY MEMBERS who need independent assistance in selecting the most appropriate UBC Faculty pension or retirement options call Don Proteau, RFP or Doug Hodgins, RFP at 687-7526 for more information. Independent financial advice for faculty members since 1982.

LOOKING AND FEELING GREAT. If you know anybody who is serious about losing weight I have the best weight loss program that works! All natural. Call Kay or Kazuko at 325-3554.

EDITOR/GHOST-WRITER. Experienced editor and ghost writer for hire. Ph.D in Literature. Services range from proofreading and editing finished manuscripts to restructuring, rewriting and ghost-writing. specialty. Structure my Reasonable rates. Memory Productions Ltd., tel/fax 685-9125.

LICENSED ELECTRICIAN living in Point Grey, specialising in home repairs and installations. Twenty years experience. Can fix anything (almost). Reasonable. References. Free estimates. Call Brian 733-3171.

## Westcoast -Waterfront Home

at Sunshine Coast, near Vancouver ideally suited for retiring couple.

Breathtaking view over Strait of Georgia to Vancouver Island and the Gulf Islands. The south-facing house is very spacious, beautifully designed and surrounded on all sides by large decks. Beautiful trees, rocky outcrops and private beach. Available for longtime lease with possibility of purchase. No dog. Tel. or Fax: (604) 885-2970.

• Permit Fees—All UBC Development & Building Permit fees have changed effective April 1, 1996

FOR MORE INFORMATION ON ANY OF THESE PROJECTS please contact JIM CARRUTHERS AT 822-8228, carruthers@cpd.ubc.ca or visit our Campus Planning & Development Home Page on the Internet at http://www.cpd.ubc.ca/cpdhome/cpdhmpg.htm or the UBC Home Page http://www.ubc.ca under News, Events and Attractions for information on UBC/GVRD Official Community Plan

Information supplied by:

Regulatory Services, a division of Campus Planning & Development, 2210 West Mall, Vancouver, BC, V6T 1Z4, 822-8228 (ph), 822-6119 (fax). March 6, 1997





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## **Boxers Or Briefs?**

Surprises of comedic proportions fill *Moliere's Shorts* starring Rebecca Harker (l), Simon Webb and Crystal Olsen playing at the Frederic Wood Theatre March 12 to 22. Get set to bust your seams following the follies of fashion fools, liars and cuckolds throughout a trio of the French master playwright's one-act plays. No show on Friday, March 14. Two for one preview on March 12. Curtain is 8 p.m. For tickets, call the box office at 822-2678.



by staff writers

edical Genetics Prof. **Ann Rose** has won an Outstanding Alumni Award from Simon Fraser University.

Rose, who graduated from SFU with a PhD in 1979, was honoured for her contributions to genetics research. She has identified a number of genes in a species of roundworm that have functions in common with human genes.

Rose leads an international research team developing a genetic toolkit for biomedical researchers working on basic biological processes, human cancers and hereditary diseases.

As a result of her work with the International



Rose

Genome Project, she is now the director of a Canada-wide genome analysis network.

THE UNIVERSITY OF BRITISH COLUMBIA

# The Brenda and David McLean Lectures in Canadian Studies 1997 Borderlands

### W.H. New

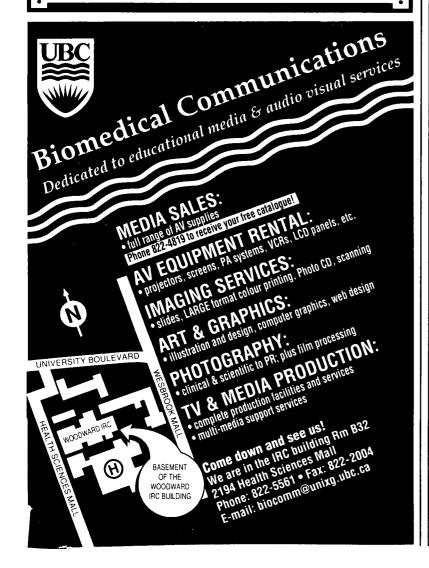
Brenda and David McLean Chair in Canadian Studies

- Monday March 10th Giddy Limits: Canadian Studies and Other Metaphors
- Tuesday March IIth
   The Edge of Everything:
   Canadian Culture and the Border Field
- Wednesday March 12th The Centre of Somewhere Else: The Pig War and English 91

Green College Coach House, 7:30pm



Program in Canadian Studies



# Interdisciplinary research: fad or practical solution?

Is interdisciplinarity a fad or a practical solution to private and public troubles?

Philosophers, historians, geographers, psychologists and literary scholars from around the world gather at UBC's Green College this month to discuss the future of interdisciplinary teaching and research. The two-day international conference, Practicing Interdisciplinarity: Nurturing Environments for Interdisciplinary Research, will attract representatives from interdisciplinary centres throughout the U.S., Australia, Germany, Sweden, England, the Netherlands, France, and Canada.

## THE UNIVERSITY OF BRITISH COLUMBIA Endowed Chair in Chinese Research

The Institute of Asian Research announces an endowed position in Chinese Research. Priority will be given to candidates with disciplinary research interests in one or more of the following areas: the social sciences (particularly geography, economics, anthropology and sociology) or professional studies (commerce, education and law). For an initial period, research will focus on aspects of economic, social and/or cultural experience in Taiwan over the last 40 years. Applications are invited from both within UBC and outside. Appointments within UBC will be for a maximum of five years. For appointments from outside UBC, they shall be at the assistant professor level, but under exceptional circumstances consideration may be given to appointment at the associate or full professor rank. Appointments will be normally tenure track and will require regular teaching in academic cross-appointment departments along with research appointments and administrative responsibilities in the Institute of Asian Research and its constituent Centre for Chinese Research.

"The conference is motivated by the renewed interest in interdisciplinarity, its opportunities, and its institutional obstacles, both in academia and science policy," says conference organizer Nico Stehr.

Stehr, a social scientist and fellow of Green College, says presentations will examine attempts to establish interdisciplinary research centres within and outside universities. The conference will address why such centres are established, what notions of interdisciplinarity are, how these notions translate into action and perceived successes and failures of interdisciplinary initiatives.

The conference opens Friday, March 21 at 10:30 in Green College's Graham House and closes on the afternoon of March 22 at the Museum of Anthropology.

Green College, UBC's first residential college for graduate students, is a focal point for interdisciplinary scholarship on campus.



Candidates should have a PhD, demonstrated outstanding teaching talent, disciplinary and area studies research achievement or promise relating to China and/or Taiwan and the ability to conduct research in Chinese language.

Inquiries and applications, including names and addresses of three referees, curriculum vitae, sample research materials and a summary of current and future research interests should be sent by May 30, 1997 to Dr. Terry G. McGee, Director, Institute of Asian Research. UBC hires on the basis of merit and welcomes all qualified applicants especially women, aboriginal people, visibile minorities and persons with disabilities. In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents.

Insititute of Asian Research, The University of British Columbia CK Choi Building 1855 West Mall Vancouver B.C. V6T 1Z2 Tel: (604) 822-4688 Fax: (604) 822-5207



# Öfficial Community Plan: Update

# Overview

An Official Community Plan (OCP) has been prepared for the University of British Columbia by the Greater Vancouver Regional District (GVRD) through a consultative process involving UBC, interest groups from on and off the UBC campus, and the public. The OCP was developed in a manner consistent with the GVRD's Livable Region Strategic Plan, which calls for the protection of the Green Zone and building of complete communities. It has been approved by UBC's Board of Governors and on Nov. 1, 1996, the GVRD Board of Directors gave third reading to Bylaw 840 - 1996, the Official Community Plan for Part of Electoral Area 'A' (UBC Area).

At the time of third reading, a number of modifications were made to the OCP including:

- amending policy 4.1.14 to indicate that the goal is that, in addition to student housing, not less than 50 per cent of market and non-market housing serve households where one or more members works or studies on the UBC campus;
- amending policy 4.1.16(f) to provide an open space standard for residential use of 1.1 hectares per 1000 people and provision to lower the standard based upon resident access to appropriate UBC facilities;
- amending policy 4.2.2 to strengthen the requirements for transportation planning and to provide the goal that single occupant vehicle travel be reduced by 20 per cent;
- amending the wording of policy 4.3.3 regarding slope and erosion issues.

The GVRD Board of Directors will forward the plan to the board's May 1997 meeting for final consideration, after UBC has provided further information on key issues, as follows:

- a comprehensive planning process for UBC that involves on-campus and offcampus stakeholders and addresses transit use, truck travel, parking and transportation demand management;
- an approach to achieving the housing objective of not less than 50 per cent of households having one or more members working or studying on the UBC campus;
- an approach to providing required social and community services for residents.

. . . . .

As part of the review process, UBC is working with consultative committees with membership from both on- and off-campus stakeholders. These committees are reviewing issues as they relate to transportation, community services and housing and provide important and direct feedback to independent consultants retained by UBC to review the OCP amendments outlined above. Once this consultative process is complete, a series of public information meetings will be held for the community at large. These will be advertised in local newspapers and will provide an opportunity for further input prior to final consideration of the By-law by GVRD in late May.

#### What is the Official Community Plan?

The OCP is a statement of policy which sets objectives for land use and transportation, particularly in relation to non-institutional development. It is intended to achieve the common objectives of both GVRD and UBC to implement the Livable Region Strategic Plan and to sustain UBC's main mission and responsibility as a leading educational institution. The OCP has been prepared through a consultative process involving GVRD, UBC, interest groups from both on and off campus, and the public.

Once in place the OCP will provide guidelines for detailed Local Area Plans which will be presented and reviewed through a public consultation process. The Local Area Plans will be guided by a joint GVRD/ UBC task force.

# Committees

## **Consultation Committee for Community Services**

The Consultation Committee for Community Services is working with the consultant to provide direct feedback on the type of community services presently lacking for oncampus residents, identify some short-term solutions (such as access to UBC's libraries) and provide feedback on a long-term strategy for the provision of municipaltype services that an on-campus community might expect.

The committee, chaired by Kathleen Beaumont of Campus Planning and Development, includes UBC representatives from: Faculty of Arts, UBC Residents Association, Treasury, Students, Faculty, Public Affairs, Staff, Library, Athletics and Recreation, President's Property and Planning Advisory Committee, and UBC Real Estate Corporation. The committee also includes representatives from: Greater Vancouver Regional District, Hampton Place Strata Corp., City of Vancouver, and University Endowment Lands.

Consultants: Mark Betteridge and Associates (MBA) Inc., Jane Fleming and Associates Inc., Urban Systems

#### **Consultation Committee for Housing**

The Consultation Committee for Housing is working with the consultant to address innovative approaches on how both GVRD's and UBC's objectives can be met regarding an approach to addressing the housing objective of not less than 50 per cent of households having one or more members working or studying on the UBC campus.

The committee, chaired by Jim Carruthers of Campus Planning and Development, includes UBC representatives from: Treasury, Alma Mater Society, Faculty, Public Affairs, UBC Real Estate Corporation, President's Property and Planning Advisory Committee, and Housing and Conferences. The committee also includes representatives from: Greater Vancouver Regional District, City of Vancouver, Canada Mortgage and Housing Corporation, Montrose Financial Group, Urban Development Institute, University Endowment Lands, and Hampton Place Strata Corp.

Consultants: Mark Betteridge and Associates (MBA) Inc., City Spaces Consulting, Jane Fleming and Associates Inc.

### **Consultation Committee for Transportation**

The Consultation Committee for Transportation is reviewing a series of options to achieve three major objectives, i.e. the reduction of the 1996 24-hour Single Occupancy Vehicle Travel by 20 per cent, to reduce the impact of truck travel patterns, and to optimize safety by reducing vehicles passing through the surround-ing communities. The review of these options includes the impact of these policies to both the community and to UBC.

The committee, chaired by David Grigg of Campus Planning and Development, includes UBC representatives from: Faculty, Alma Mater Society, Students, Staff, Greening the Campus, Public Affairs, Parking and Transportation, Senate, and President's Property and Planning Advisory Committee. The committee also includes representatives from: City of Vancouver, Point Grey Ratepayers Association, SW Marine Drive Homeowners Association, Dunbar Ratepayers Association, B. C.

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Transit, University Endowment Lands, Greater Vancouver Regional District, and
 Ministry of Transportation and Highways.
 Consultants : Mark Betteridge and Associates (MBA) Inc., N. D. Lea Consultants,
 Jane Fleming and Associates Inc.

You can read the Official Community Plan and supporting documents on the Internet and send questions and comments by e-mail:

http://www.cpd.ubc.ca/ocp/index.htm

If you would like to ask questions or comment on this process, please write or e-mail:

Geoff Atkins, Associate Vice-President, Land and Building Services University of British Columbia 2329 West Mall, Vancouver, BC V6T 1Z4

e-mail: geoff@plantops.ubc.ca