

Support costs growing

# Research grants threatened

By DEBORA SWEENEY

UBC administrators and researchers say they're caught in a funding crunch that could force the university to turn down lucrative research grants in the future.

While the university is one of the most successful in Canada in attracting research funding, it is having trouble keeping up with

mushrooming support costs that go along with the grants.

"I think there are circumstances where we could have to turn away grants," said Robert Miller, vice-president, research. "For instance, if we get a major piece of equipment that we can't afford to install, then we can't take the grant."

In Canada, research funding from federal

agencies such as the Medical Research Council (MRC), the Social Sciences and Humanities Research Council (SSHRC), the Natural Sciences and Engineering Research Council (NSERC) and the Canada Council is distributed on the basis that provincial government operating grants and tuition fees will cover overhead costs.

A federal research grant covers salaries,

supplies, equipment, computer time, and limited travel. Overhead costs which are not included are secretarial support, renovations, repairs, utilities, postage, courier, telephone, janitorial and administration.

"I've been on 14 granting committees and I have never seen anybody get supported for secretaries or janitors or hospital-

See SUCCESS on Page 2

## Study focuses on how parties influence voters during election

By PAULA MARTIN

A UBC-led political science team studying the Nov. 21 federal election aims to tell Canadians what techniques political parties use to influence voters.

"We're dealing voters in on what the parties are trying to do to them," said Richard Johnston, principle investigator of the \$470,000 national federal election study.

"This includes manipulating the leaders' images, their own and other parties, and controlling the agenda by framing the issues in the voters' minds."

The research team will examine, among other things, the impact of the media, poll results and the economy on voters' perceptions, as well as voters' perceptions of party leaders and candidates.

Johnston said this is likely a very special election because of predicted fundamental changes in the party system if the Tories dominate in Quebec and the NDP supplant the Liberals as the official opposition.

And, although most campaigns don't have much impact on an election, this one promises to have more, he added.

"We will have a better handle than anybody on why the election worked

out the way it did," Johnston said. "The study is technically and conceptually more sophisticated than any of its predecessors."

Although there have been six previous national election studies, this is the first one to track the campaign by a "rolling cross-section." Instead of taking one sample, researchers will collect 45, one for each day of the campaign.

"We can then get into analyses that compare the early part of the campaign with the late part of the campaign," Johnston said. "If there is a dramatic event in the middle of the campaign, we can split the sample from before to after and see if we can see any impact of that event."

The researchers will also be conducting experiments by varying the order and wording of questions they ask.

"The most innovative thing is that we will be looking at the issues that seemed to us, on the eve of the election, most likely to play a role in the campaign," Johnston said, citing free trade, defence, environment, housing and abortion as examples.

The study will show how parties and other groups mobilize the vote by devices such as advertising and constituency campaigning.

The rolling cross-section will consist of a 40-minute interview with about 3,500 voters chosen by random sample. As many as possible of these voters will be interviewed for 20 minutes after the election. The same people will also be asked to complete a written questionnaire.

The confidential nature of the study means the researchers won't be able to comment on its findings or election issues during the campaign.

Also working on the three-year study will be Andre Blais of the University of Montreal, Jean Crete of Laval University and Henry Brady of the University of Chicago. Preliminary results of the research, funded by the Social Sciences and Humanities Research Council of Canada, should be ready in the spring.



The University of British Columbia, Vancouver, B.C.

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A donation box at the Intramural noon hour runs on Tuesday and Friday last week encouraged participants to support UBC's United Way Campaign. Pledge forms were distributed to many on campus last week.

### University leaders meet

## World peace discussed

By PAULA MARTIN

University presidents from around the globe tackled world peace at a recent meeting in Talloires, France.

"The universities of the world have profound moral responsibilities to increase understanding of the awful risks of the nuclear age," the newly formed Talloires Group declared at the end of its week-long conference, held to discuss worldwide education on arms control, negotiation and conflict management.

UBC President David Strangway, who helped develop the Talloires declaration, was the only Canadian representative at the meeting of 45 academic leaders, who agreed to organize into a force for disarmament through education.

"Universities, of course, have very large numbers of students

around the world and these are the people who are going to be making many of the decisions of the future,"

### Panel named in contract talks

University and Faculty Association representatives have named an arbitration panel to help resolve stalemated contract negotiations. No date has been set for the panel's first hearing.

Panel members are Stephen Keller, former chairman of the Labor Relations Board, Leon Getz, a lawyer with the firm of Freeman and Company and Hugh Ladner, Q.C., of the law firm Edwards, Kenny and Bray.

Neither side has ruled out the possibility of mediation if terms agreeable to both parties can be worked out.

Strangway said. There are about 60-million students and six-million faculty members in higher education around the globe.

He said that he found it refreshing to discuss global concerns with educators.

"University presidents are beginning to talk among themselves about these kinds of issues, which I find very encouraging because it does reinforce the significance of our role in society," Strangway said.

The UBC president said he was particularly interested in discussions on conflict management and negotiation. It is important "whether you're dealing with the children in the playground who are fighting to get the toy, management and labor trying to negotiate salaries, or nations resolving disputes."

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### Advisory group set to oversee UBC Reports

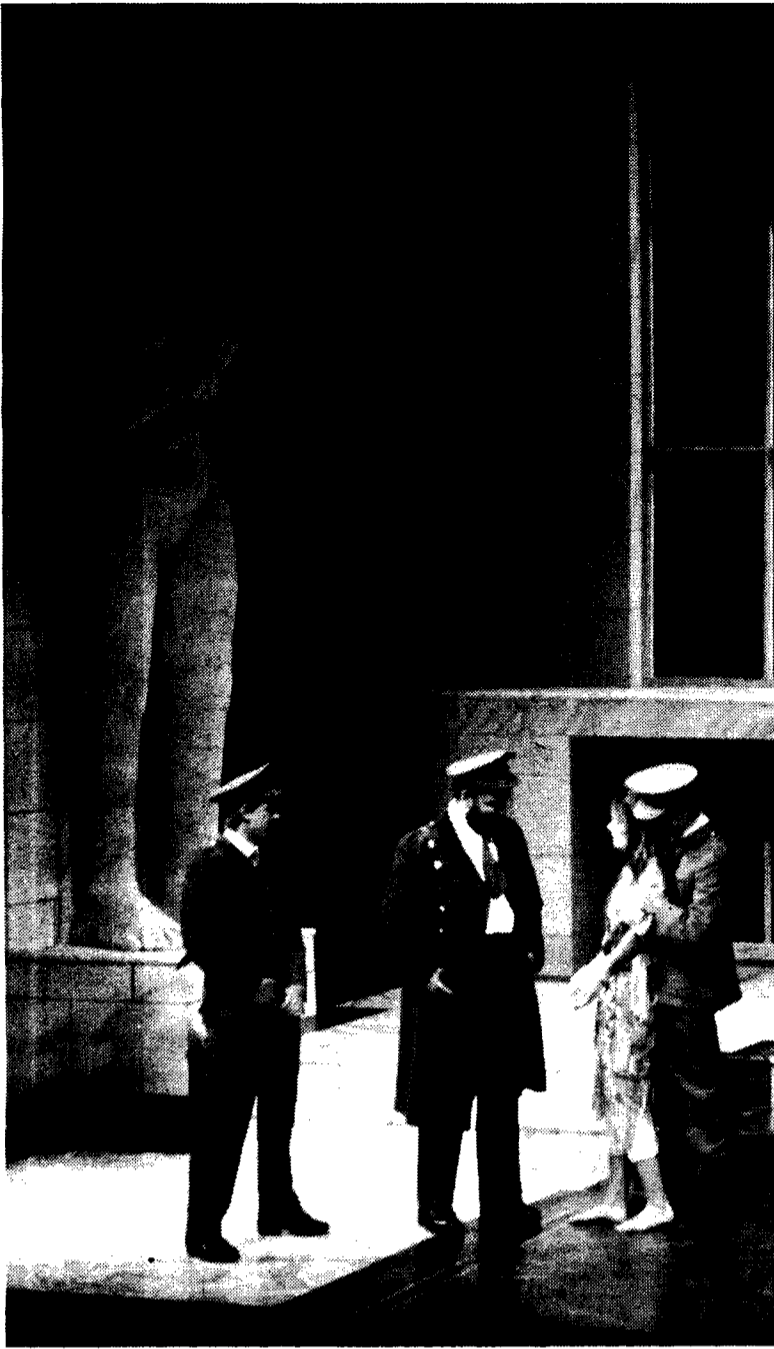
An advisory committee has been established to oversee the publication of UBC Reports and ensure the twice-monthly faculty and staff newspaper fulfills the mandate set by the President's Office.

The seven-member UBC Reports Advisory Committee will also act as a sounding board for story ideas and policy proposals, and offer advice on potentially controversial issues.

UBC Reports was named best college/university newspaper in 1987 by the Association of Universities and Colleges of Canada, an award it shared with the University of Toronto Bulletin.

The newspaper's goal is to keep the university community informed about issues that affect it. As well, UBC Reports strives to keep the campus and off-campus communities informed about UBC's research,

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Guards seize Antigone (Allison Sanders) in a scene from the Jean Anouilh play *Antigone*, a UBC theatre department production which ran Oct. 11-15. The guards were played by Glen Thompson, Timothy Hyland and Kurt Eby.

## Success creates added burden

Continued from Page 1

ity," said Miller. "Now, imagine everything else it takes to run a research project: How do the people get hired? Who types and mails the grants? Who's responsible for employee benefits, heat, light, gas, janitors, maintenance of space, alterations? Almost anything else you can think of is called an indirect cost."

According to UBC's operating budget for 1988-89, the total for research grants and contracts was \$75-million -- up \$11-million, or 17 per cent, from the previous year.

"When I first came to this university in 1971, most professors had only one or two grants," said Miller. "Now, many have half-a-dozen grants and several have more than 10 grants that they're primary investigators on."

That success carries a high cost, said Daniel Birch, vice-president, academic and provost.

"The more successful we are in getting those research funds, the more burden we're putting on an operating grant that's driven by students and not by research activity," said Birch. "There is nothing at the provincial level that relates to success in obtaining competitive research funding."

Birch said continuing research at the university is important if UBC is to maintain its role of being an excellent teaching university.

While UBC receives approxi-

mately 80 per cent of the competitive research funding in B.C., it gets only 60 per cent of the operating grants distributed to the province's three major universities, Birch said. And, a recent study by the Canadian Association of University Business Officers (CAUBO) shows the actual overhead cost of research in Canadian universities is more than half of the direct costs.

A 1984 NSERC task force report recognized an urgent need for support for the \$48-million of NSERC-sponsored research.

"There is unanimity among senior administrators that universities will have increasing difficulty supporting the infrastructure costs of research," the report said.

It also said the province of Quebec had begun to support both basic and applied research in its universities.

University administrators across Canada are lobbying for more federal and provincial government support. They have proposed more funding for national granting councils to cover indirect costs. They also want provincial governments to reward their institutions for success in obtaining research grants by covering those costs.

"I'm not saying we should be living in the lap of luxury, but to be competitive, we need to make sure we have some way of keeping our overhead costs in tow," said Dr. Bernard Bressler, associate dean of medicine.

## Epstein Barr Virus

# Diagnosis often wrong: MD

By DEBORA SWEENEY

Chronic fatigue is one of the most common complaints patients take to their doctors, but associating the condition with Epstein Barr Virus is irresponsible and unsubstantiated, says the doctor who identified the virus.

In an interview at UBC, Dr. Michael Epstein of the Royal Society of London said the diagnosis of Chronic Epstein Barr virus is of little or no help in determining the cause of a patient's tiredness or what the treatment should be. He added that, in his opinion, doctors diagnose the condition to get patients off their backs.

"I think the situation is very well summed up by a scientific friend of mine on the east coast of the United States who was asked by a journalist, 'Well, what is this new epidemic of Chronic Epstein Barr virus infection?' and he replied, 'There is no epidemic of infection -- there is an epidemic of diagnosis.'"

In recent years Epstein Barr virus, which is a cause of mononucleosis, has been suspected as a cause of chronic fatigue, also known as "Yuppie flu" because it appeared to strike mainly young, creative women in their 20s and 30s.

Eighty-five per cent of the world's population is exposed to and has antibodies to Epstein Barr virus, a herpes

virus. Antibodies are natural disease-fighting agents produced by a person's system after it detects invading infections. However, there is no documented scientific evidence that links the virus with "Yuppie flu."

"I don't think you'll find any serious virologist working with Epstein Barr virus who would attach much significance to this new phenome-

non," said Dr. Epstein. "I hesitate to say this, but I think that from the practitioner's point of view, the diagnosis gets these people off their backs."

"I think it's a myth but, mark my words, I'd take back everything tomorrow if someone came forward with important evidence. There isn't any, and that's the trouble," he said.

## UBC will review Gay Games request

UBC has asked organizers of Celebration 90: Gay Games III and Cultural Festival to make formal its request to the university for the use of housing and facilities on campus for the planned 1990 games and festival.

The request was made after representatives of the Gay Games, including Burnaby MP Svend Robinson, appeared before the Board of Governors.

At the meeting, Gay Games representatives said that when they first contacted UBC, they were not sure what campus athletic facilities were needed or how many people needed accommodation.

In clarifying their position, the organizers said the request was limited to a gym for volleyball and possibly a basketball tournament. They requested the use of up to 200 rooms should there not be enough accommodation elsewhere. They added that the arrangements were essentially complete and that the games would use housing and athletic facilities throughout the city.

UBC President David Strangway said the university will review the formal request from Gay Games organizers. The Board of Governors will consider the request at a future meeting.

## Ford Foundation grant awarded

The Ford Foundation, the largest charitable foundation in the U.S., has awarded UBC a \$173,000 (Cdn.) grant to fund Southeast Asian studies.

The money is part of a \$500,000 (U.S.) grant awarded by the foundation to the Northwest Regional Consortium for Southeast Asian Studies.

The consortium, which includes the University of Washington and the University of Oregon, as well as UBC, was formed in May, 1987 and held its first conference this month in Eugene, Ore.

"This grant will enable UBC to

continue to build on its core resources on Southeast Asia and increase graduate and undergraduate knowledge of the area," said Terry McGee, director of the Institute of Asian Research.

"It shows that because the university has developed a depth of resources on Asia, major foundations are willing to support the ongoing development of centres of excellence."

A grant from the provincial government has already resulted in a new Indonesian language and culture post

in the Asian Studies Department. An Indonesian research project, funded by the Canadian International Development Agency, is in place in the Institute of Asian Research and UBC is the first university in Canada to teach the Indonesian language.

The new funding will help establish a post at the Institute of Asian Research in modern Indonesian studies in either political science, sociology or anthropology. Some of the money will also be used to sponsor a yearly conference, faculty exchanges and lectures.

## X-Ray grant proves costly

By DEBORA SWEENEY

In the basement of UBC's chemistry building, a small seminar room constructed in 1950 is being renovated to house the latest in 1980s technology -- an X-Ray Photoelectron Spectrometer.

Made possible through a \$700,000 funding grant, it is the first machine of its kind in North America to be awarded to a university.

The purpose of the machine is to chemically analyze why substances adhere to different surfaces. Researchers hope to find out why automobiles corrode, how fillings stick in teeth, what keeps wings on airplanes, and to develop better methods of using wood preservatives.

The university's chemistry department was awarded the federal grant after an intense funding competition.

"UBC's chemistry department is the most successful in Canada," said Dr. Lawrence Weiler, head of chemistry. "We received six major grants in the last seven years. Usually if you get one every five years, you're lucky."

Weiler has seen research funding

in his department triple from \$2-million to more than \$6-million in five years. He estimates research overhead costs this year will be \$3.5-million -- \$90,000 for the X-Ray Photoelectron Spectrometer alone.

Dr. Keith Mitchell applied for the grant. Aside from his teaching duties at the university, he researched and wrote a 150-page grant application with support from 30 university professors and 18 outside companies, including B.C. Hydro, MacMillan Bloedel, Moli Energy, B.C. Research, Cominco and the Pulp and Paper Research Institute.

When the grant application was approved, Mitchell applied for further support for a research scientist to run the machine.

Then, renovations began to convert a seminar room to house the machine. The total cost: \$20,000, including \$5,000 for a power line and \$5,000 for air conditioning. Costs also include tools, cables, curtains, a sink, waterlines, a water filter, and a special rig for a tank of liquid nitrogen which could explode if it tipped over.

When the machine arrives next

month from West Germany, overhead costs also will include \$20,000 to \$25,000 in installation costs, and \$40,000 to \$45,000 for maintenance and repair.

"We can't allow the machine to be down," said Weiler. "That would be like leaving \$700,000 sitting in the bank and not getting interest."

## Advisory

Continued from Page 1 teaching and public service contributions.

The five faculty members sitting on the committee are: John Dennison, professor, Department of Administrative, Adult and Higher Education; David Dolphin, acting dean, Faculty of Science, Morton Low, co-ordinator, Health Sciences; June Lythgoe, director, Office for Women Students; and Patricia Marchak, head, Department of Anthropology and Sociology.

The two representatives from the Community Relations Office are: Howard Fluxgold, editor, UBC Reports and Don Whiteley, manager, News Bureau.

## Science Council awards

# UBC researcher, grads win gold

By GAVIN WILSON

A UBC medical researcher and two UBC graduates who founded the Nexus Engineering Corp. are among the 1988 winners of the B.C. Science and Engineering Gold Medals, the province's highest award for excellence in science and engineering.

The awards, presented by the Science Council of B.C., will be formally announced tonight (Oct. 20) at 7 p.m. on a special one-hour live television program broadcast on the Knowledge Network.

Donald Calne, who holds a chair as a Belzberg Family Professor of Medicine at UBC, will collect his award for research into neurological diseases. He has studied brain disorders in the elderly such as Parkinson's, Alzheimer's and Lou Gehrig's disease (also

known as motor neuron disease or ALS). He has also achieved international acclaim for his pioneering treatment of the neurological disease, dystonia, using botulinum toxin.

Calne, who has published nearly 300 scientific papers, several books and chapters of books, is a vigorous advocate of the hypothesis that environmental factors may contribute significantly to common neurological diseases of the elderly and even to normal aging of the brain.

UBC electrical engineering grads Basil Peters and Peter van der Gracht share an award for their work in founding one of the university's



Calne

most successful spin-off companies. Nexus, which they began in a Burnaby garage, has grown into a multi-million dollar operation employing 200 people. It designs and manufactures more than 50 products for satellite, broadcasting and cable television systems.

The other gold medal winner for 1988 is University of Victoria astronomer Don Vandenberg. His theoretical work into the age of globular star clusters has helped to push back the accepted age of the universe to as much as 14-billion years.

This year's winners were selected from a field

of 29 nominees, the largest ever, by a panel chaired by TRIUMF director Erich Vogt.

The panel also included former medal winners and representatives of both the local and national scientific and engineering communities.

The 1988 medallists will be honored at a dinner to be held Tuesday, Oct. 25 at the

Hotel Vancouver. Guest speaker at the dinner will be Geraldine Kenney-Wallace, chairman of the Science Council of Canada.



Peters



van der Gracht

## Seoul teaches painful lesson, sports MD says

By DEBORA SWEENEY

Dr. Doug Clement of the UBC Sports Medicine Clinic compares his recent experiences at the Seoul Olympics to going to the dentist.

"It may have been a painful experience, but often you like the end result," he said.

A coach for the Canadian Olympic track and field team, Dr. Clement saw Ben Johnson stripped of his gold medal after testing positive for anabolic steroids and had to deal with the anxiety and confusion experienced by Johnson's teammates.

As a longtime crusader against the use of drugs in sports, Dr. Clement hopes the Johnson tragedy will lead to the eradication of drug use by athletes.

"For years, there's been suspicion of drug use among a segment of the Canadian track and field team and

segments of other national teams," said Dr. Clement. "This positive test in such a prominent athlete confirms it, and the action by the International Olympic Committee is a clear indication that action will be taken against anyone who uses drugs."

The Johnson drug scandal immediately forced several Olympic athletes to reconsider their attitudes about the use of performance enhancing drugs, Dr. Clement added.

"They saw the successes of the master group and Ben Johnson and started to question whether our approach of prohibiting drug use was correct," he said. "In the light of the Johnson scandal, they said 'You were always right and I was totally wrong to even be thinking of using drugs.'"

Dr. Clement hopes the strong public condemnation of drug use in the wake of the Johnson affair will en-



Clement

courage athletes everywhere, including here on the UBC campus, to rule out the use of performance enhancing drugs.

"I don't think anyone perceives it's worth it because of the devastating results we've seen on Ben Johnson's life. His life is on the line in terms that he'll end up, in all likelihood, bankrupt and without any positive feelings about himself. It's a moral lesson that shows it's just not worth it," he said.

On Fri., Oct. 21, Lynda Filsinger, Director of the Sports Medicine Council of B.C., will discuss the use and misuse of drugs in sport at 12:30 p.m., main concourse, SUB.

## Universities asked to set up centres of excellence

By JO MOSS

The federal government has invited UBC and other Canadian universities to establish centres of excellence to carry out research on important issues or particular regions in developing countries.

Monique Landry, federal Minister for External Relations and International Development, announced last March that the government would provide up to \$10-million annually to support development of these centres.

Letters were recently sent to Canadian universities inviting their participation.

The Canadian International Development Agency wants to encourage Canadian universities to play a greater role in Canada's overseas development projects, said Aubrey Morantz, Director General of CIDA's Institutional Cooperation and Development Services Division.

UBC is currently involved in 18 CIDA-funded projects.

Morantz was on campus Oct. 3 to help UBC celebrate Development Day, established by CIDA this year to highlight and increase awareness about Canada's overseas development programs.

Establishing centres of excellence reflects an increased commitment in Canada's development assistance and signals a new direction in Canadian overseas aid, Morantz said.

Providing technical expertise and training in remote countries such as Peru may seem far removed from the day-to-day lives of most Canadians. But how Canada deals with the problems of developing countries now will affect our economic future by enhancing ties, he added.

The fastest growing sector of the world economy, developing countries account for one quarter of all world trade. And while Canadian aid is administered with no strings attached, Morantz said more than one firm has found new markets in a developing country through involvement in an aid program.

Under the new federal development assistance strategy tabled in Parliament last March, Canada is committed to helping solve common global problems. CIDA projects involving hydro-electric power or industrial processes, for example, will now be assessed for their impact on the local environment.

Other areas of concern include desertification which claims six-million hectares—an area larger than Nova Scotia—each year, and contributions to the greenhouse effect through logging of 12-million hectares annually worldwide, an area comparable to one twelfth of B.C. A burgeoning global population is predicted to rise to six billion, from five billion, in the next 20 years.

Morantz said these concerns have become international, rather than individual problems. "Development programs can no longer be a one-way street because the world has become much more interdependent."

One area of development assistance in which Canada is taking a leadership role is in integrating women in all development projects. Agricultural training programs, for example, were formerly geared to male farmers when much of the agricultural work is traditionally done by women.

"We were training the wrong segment of the population," Morantz explained. "The needs and interests of women should be taken into account."

In addition, Canada has forgiven \$700-million in aid loans to developing countries and converted the loan program to non-repayable grants or contributions. And CIDA plans to double funding for scholarships over the next five years.

Two cents of every Canadian tax dollar, a total of \$2.7-billion annually, currently goes to assist developing countries. Of the 40 least developed countries in the world, 27 are in Africa, a continent that will receive 45 per cent of Canada's bilateral aid over the next five years.

### Letter to the editor

## Enrolment issue clarified

Editor:

I am concerned that your article on student enrolment at UBC (UBC Reports Sept. 22) may have left readers with an incorrect perception about students in the School of Family and Nutritional Sciences.

First, high school applicants constitute only a fraction of incoming students. Thus, simply presenting information about high school graduates applying directly to the school does not present a full picture.

Second, the school has been restructured in the last three years. Only Dietetics and Home Economics students register in the school per se. Students can now enrol in the Faculty of Arts and major in Family Science. Or they can enrol in the Faculty of Science and major in Nutritional Sciences. Both these faculties, of course, have quotas.

Since becoming available for

elective credit, enrolments in Family Science courses have increased 115 per cent. And Dietetics is the school's most popular program. Increases in demand have been very noticeable in the last few years and there is now a limited enrolment, with approximately 125 applicants for 50 spaces.

I'm sure that those people who

were rejected from those programs, despite meeting admission standards, feel your headline "Programs full, qualified students turned away" applied to Family and Nutritional Sciences too.

Daniel Perlman  
Director, School of Family and Nutritional Sciences

## Agreement reached

Continued from Page 1

agement.

As well, the Talloires Group agreed that each participating university should create an international information centre to support the exchange of information, communication links, access to computer networks and television linkages by satellites between university classrooms around the world.

To achieve their goals, the educators agreed that research and teaching should be interdisciplinary, combining arts, sciences, humanities and social sciences.

The group also agreed that universities should actively support the training of scholars and the development of courses to incorporate arms control, negotiation and conflict man-

# The University of British Columbia

## Report of the Vice-President Administration and Finance

### 1987-88

The audited financial statements are a public document. Copies of the University's audited financial statements have been provided to each University Department and the University Library. For those interested in more information than provided in these highlights, please refer to the copy in your department.

Table 1 describes the activities in each of five of the six separate funds involved in the financial reporting of UBC during the 1987-88 fiscal year. Excluded is the Student Loan and Endowment Principal Fund. The concept of fund accounting organizes transactions so that revenues and their related expenses are accounted for in separate funds in accordance with objectives specified by donors, limitations and restrictions imposed by sources outside the University, and determinations made by the Board of Governors.

#### GENERAL PURPOSE OPERATING FUND

The revenue and expenses used in the general operations of the University are in this fund. The University ended the 1987-88 fiscal year with a surplus of \$2 million after provision for an inter-fund transfer of \$6 million and appropriations for the year of \$3.4 million. There was an increase in operating income over 1986-87 of \$12.6 million resulting primarily from increases in Provincial grants of \$8.6 million and student fee credit course revenues of \$1.4 million. Total expenses at \$230.4 million were up \$7.9 million with \$6.8 million of the increase attributable to salaries and benefits.

#### SPECIFIC PURPOSES FUND

The revenues and expenditures for projects stipulated by donors and income earned on the Endowment Principal Fund are included in this fund. Trust fund revenue was \$21.2 million and Endowment Fund investment income was \$10.5 million for a total of \$31.7 million. With expenses of \$26.9 million and a \$6.1 million interfund transfer, the year-end balance was \$26.6 million, \$1.3 million lower than last year. The 1987-88 endowment fund income of \$10.5 million while representing a return on investments of approximately 9.3% is \$6.4 million lower than the \$16.9 million earned in 1986-87. However, the \$16.9 million was higher than normal due to extraordinary capital gains as a result of a reorganization of the portfolio by external money managers.

#### SPONSORED RESEARCH FUND

Included are funds specifically identified for research grants and contracts or related activities as provided by govern-

ment granting agencies, research institutes and other public and private agencies. Revenue increased from \$65.3 million in 1986-87 to \$71.5 million this year. The \$6.2 million increase is accounted for by increases in Natural Sciences and Engineering Research Council grants of \$1.4 million, Medical Research Council grants of \$1.2 million, Business and industry funding of \$.8 million and other less significant variations. Schedule 5 to the Financial Statements provides additional details.

#### ANCILLARY ENTERPRISES FUND

Ancillary enterprises provide goods and services to the University community and are expected to operate on a break-even basis. Included are the Bookstore, Food Services, Student Housing and Conferences, Oyster River Farm, Parking, Health Sciences Parkade, Tennis Centre, Athletic and Sport Services, UBC Press, Media Services and the Education Measurement Research Group. In 1987-88 an administrative charge of 1/2 of 1% of sales and services was implemented which generated an additional \$250,000 of revenues to the General Purpose Operating Fund. This charge will increase to 1% in 1988-89 and 1.5% in 1989-90. The charge partially covers the cost of university services not specifically billed to the ancillary enterprises such as Purchasing, Personnel Services, Financial Services, Occupational Health and Safety and Security.

#### CAPITAL FUND

The capital fund consists of gifts, grants, interest and authorized capital borrowing received for the purpose of acquiring capital assets including those pertaining to ancillary enterprises. \$15.8 million of the revenue and expenses are offsetting amounts which relate to servicing the debt on long-term debenture funding for completed buildings and other past capital projects financed by the Provincial government. The loan of \$4.8 million is for the upgraded SL-1 telephone switch and will be repaid from operating savings generated by the new system over the next 7 years.

#### COMBINED FUNDS

The total revenue and expenses of all five funds are shown by object of revenue and expenses. The total revenue for all

funds was \$420.5 million, up \$15.5 million. Total salaries and benefits were \$259.5 million. All expense objects increased over 1986-87 except Building contracts which decreased \$5.1 million.

Table 2 shows the source and distribution of general purpose operating funds over the past five years.

Table 3 shows a comparison of the Total General Purpose Operating Expenses by object of expense for the five years 1983-84 to 1987-88.

Table 4 shows the change in total Sponsored Research Funding since 1983-84.

Table 5 shows the source and distribution of Sponsored Research Funds.

#### GENERAL

Telereg was introduced in 1988 allowing students to register using touch-tone telephone and voice response technology. Between June 15 and September 15, 1988 there were approximately 158,000 calls handled by Telereg. The planning phase of the new Integrated Human Resources Information system which includes Budgets, Personnel and Payroll is underway and is scheduled for completion in December, 1988. During the year there were additional enhancements to the Alumni/Development system, whose features include a centralized donor database and a pledge system, in anticipation of the major fund raising campaign. In December, 1987 Purchasing installed a microbased Requisition Tracking system. The system facilitates processing and allows Purchasing to respond quickly to questions regarding the status of a Requisition.

During the year the University participated in the development of an Insurance Reciprocal arrangement for Canadian universities. The work culminated with the formation of the Canadian Universities Reciprocal Insurance Exchange (CURIE) which began operations in January, 1988. CURIE is an insurance mechanism that is designed to bring stability and reduction in premiums and to provide broader coverage than that available from the regular insurance marketplace. 42 Canadian universities have contractually agreed to share their property and liability risks. The Agreement is licensed and supervised by the provincial Superintendents of Insurance.

In January, 1988 students were given the option of paying tuition fees at any branch of the Bank of Montreal in Canada. A significant number of students have taken advantage of this service, reducing the long lineups of students paying fees at

Registration time in Financial Services. The way in which the university deals with couriers was changed during the year. Previously, we dealt with approximately 55 courier companies with varying degrees of success and rates. After a tender proposal to 70 companies, 7 were selected for two years with discounted rates averaging 35%. During September, 1987 to April, 1988 the university saved approximately \$100,000 in courier charges.

The Acadia Park Phase III (\$7.0 million) development of 77 units for family housing is underway and is scheduled for completion in January, 1989. The new Parkade (\$6.3 million) is under construction and is scheduled for completion in December, 1988. It will accommodate 1,125 vehicles and 125 surface parking spaces and replaces the Student Union Building lot facility. Also under construction is the Chemistry/Physics building (\$16.4 million) to be completed in June, 1989. Capital projects which have been tendered include the David Lam Asian Gardens (\$2.0 million) and the Children's Day Care Centre (\$2.0 million). Both will be completed in April, 1989.

The past year has seen the Provincial Government proclaim the University Foundations Act, establishing the University of British Columbia Foundation with full status as an Agent of the Crown. The intention of the Foundation is to facilitate the transfer of substantive gifts to the university. As of September 1, 1988 the Foundation has received over \$3.4 million in donations. During the year the University itself also established two other entities designed to increase donations and enhance cash flows. The American Foundation for UBC has been incorporated in Washington, D.C. as a American non-profit organization. As such, the university can utilize the Foundation as its nominee for encouraging donations from American friends and alumni. The incorporation and subsequent successful application for exemption for taxation purposes as a public foundation allow American donors similar tax advantages to their Canadian counterparts when donating to the university. The UBC Real Estate Corporation is a wholly-owned subsidiary of the university, incorporated in April, 1988 to manage and develop the university's land holdings. The Corporation is an entrepreneurial response to the university's on-going financial needs. The university's principal objective is to generate an annual net cash flow which would be utilized for selected capital and endowment fund purposes.

A.B. Gellatly  
Vice-President,  
Administration and Finance  
MARCH 31, 1988

**TABLE 1**  
**THE UNIVERSITY OF BRITISH COLUMBIA**  
**STATEMENT OF CHANGES IN UNAPPROPRIATED FUND BALANCES**  
**FOR THE YEAR ENDED MARCH 31, 1988**  
(thousands of dollars)

	General Purpose Operating	Specific Purposes	Sponsored Research	Ancillary Enterprises	Capital	1988	Totals 1987
<b>Revenue and other additions</b>							
Government grants and contracts							
Government of Canada	\$ -	\$ 2,180	\$ 48,414	\$ -	\$ 5	\$ 50,599	\$ 48,163
Province of British Columbia							
Base operating	183,30	-	-	-	-	183,301	163,093
Designated	2,555	6,811	434	-	-	9,800	14,900
Early terminations	-	-	-	-	-	-	2,600
Engineering expansion	-	-	-	-	-	-	750
Other	-	6,455	5,665	-	26,181	38,301	34,108
Municipalities	-	16	20	-	-	36	10
Other provincial govts.	-	305	50	-	-	355	172
Foreign governments	-	831	1,157	-	-	1,988	2,738
Student fees	44,182	208	-	1,012	-	45,402	41,701
Bequests, donations and non government grants	-	4,453	15,578	-	986	21,017	19,772
Sales and services	1,199	-	193	49,006	-	50,398	47,198
Income from investments	2,882	10,469	-	573	-	14,522	20,913
Loans	-	-	-	10	4,770	4,780	8,947
	<u>234,119</u>	<u>31,728</u>	<u>71,511</u>	<u>50,601</u>	<u>32,540</u>	<u>420,499</u>	<u>405,065</u>
<b>Expenses and other deductions:</b>							
Salaries							
- Academic	97,021	6,505	12,557	-	-	116,083	110,965
- Student service	5,641	2,715	7,562	-	-	15,918	16,707
- Staff	67,482	4,841	16,294	12,918	496	102,031	95,744
	<u>170,144</u>	<u>14,061</u>	<u>36,413</u>	<u>12,918</u>	<u>496</u>	<u>234,032</u>	<u>223,416</u>
Benefits	21,097	735	2,365	1,186	41	25,424	23,833
Travel, field trips, moving	3,739	1,768	4,506	-	76	10,089	8,666
Library acquisitions	5,162	427	406	-	-	5,995	5,979
Operational supplies and expenses	17,496	989	15,076	5,553	3,446	42,560	38,906
Furniture and equipment	3,538	2,287	7,867	787	5,230	19,709	13,972
Utilities	8,177	85	682	1,288	361	10,593	10,363
Renovations & alterations	490	108	110	1,672	5,870	8,250	4,581
Scholarships, fellowships and bursaries	3,489	3,932	521	-	-	7,942	7,422
Professional fees	2,369	2,266	671	-	1,547	6,853	5,708
Cost of goods sold	-	-	-	17,451	-	17,451	15,473
Debt servicing	-	-	-	6,304	15,926	22,230	21,224
Building contracts	-	-	-	-	3,110	3,110	8,245
Internal cost recoveries	( 1,609)	205	1,154	250	-	-	-
External cost recoveries	( 3,695)	-	-	-	-	( 3,695)	( 3,464)
	<u>230,397</u>	<u>26,863</u>	<u>69,771</u>	<u>47,409</u>	<u>36,103</u>	<u>410,543</u>	<u>384,324</u>
<b>Transfers and appropriations:</b>							
Released from prior years' appropriations	1,035	-	-	3,898	5,949	10,882	5,889
Interfund transfers	( 606)	( 6,156)	245	( 5,840)	6,486	( 5,871)	( 3,828)
Appropriations for the year	( 3,381)	-	-	( 1,272)	( 8,976)	( 13,629)	( 10,882)
	<u>( 2,952)</u>	<u>( 6,156)</u>	<u>245</u>	<u>( 3,214)</u>	<u>3,459</u>	<u>( 8,618)</u>	<u>( 8,821)</u>
<b>Net increase (decrease) during the year</b>	<u>770</u>	<u>( 1,291)</u>	<u>1,985</u>	<u>( 22)</u>	<u>( 104)</u>	<u>1,338</u>	<u>11,920</u>
Unappropriated Fund balance, beginning of year	( 547)	27,921	15,380	261	2,566	45,581	33,661
Unappropriated Fund balance, end of year	<u>\$ 223</u>	<u>\$ 26,630</u>	<u>\$ 17,365</u>	<u>\$ 239</u>	<u>\$ 2,462</u>	<u>\$ 46,919</u>	<u>\$ 45,581</u>

**TABLE 3**  
**SUMMARY COMPARISONS OF TOTAL GENERAL PURPOSE OPERATING EXPENSES**  
**1983-84 TO 1987-88**

	Academic %	Student Service %	Staff %	Total %	Benefits %	Sub Total %	Travel & Field Trips %	Library Acquisitions %	Operational Supplies & Expenses %	Utilities %	Furniture Equipment & Alterations %	Total %
1987-88	42.2*	2.4	29.2	73.8	9.2	83.0	1.6	2.3	8.1	3.5	1.5	100.0
1986-87	42.8	2.5	28.5	73.8	9.0	82.8	1.4	2.4	8.1	3.7	1.6	100.0
1985-86	43.7	2.5	28.4	74.6	9.1	83.7	1.1	2.3	5.2	4.3	3.4	100.0
1984-85	44.0	2.3	29.1	75.4	9.1	84.5	1.1	1.9	5.7	4.1	2.7	100.0
1983-84	45.1	2.4	29.2	76.7	9.0	85.7	1.1	1.9	6.2	3.3	1.8	100.0

\* Prior to 1987-88 early termination salary costs were charged to General Purpose Operating expenses. Starting in 1987-88 most of these costs are charged to an endowment income account in the Specific Purposes Fund.

**TABLE 4**  
**TOTAL SPONSORED RESEARCH FUNDING**  
(thousands of dollars)

	Amount
1983-84	\$ 54,906
1984-85	63,096
1985-86	59,619
1986-87	65,280
1987-88	71,511

**TABLE 2**  
**SOURCE AND DISTRIBUTION OF THE GENERAL PURPOSE OPERATING FUND**  
**FOR THE YEARS ENDED MARCH 31, 1984 TO 1988**

	1988 %	1987 %	1986 %	1985 %	1984 %
<b>Source</b>					
Province of B.C. - Grants	79.4	80.0	79.7	81.2	83.9
Student Fees - Credit	15.2	15.4	15.3	14.1	11.5
Student Fees - Non-credit	3.7	3.0	3.2	2.9	2.8
Other	1.7	1.6	1.8	1.8	1.8
	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>
<b>Distribution by Function</b>					
Academic and Associated					
Academic Services	72.4	72.1	73.2	72.9	73.4
Library	7.3	7.5	7.3	7.5	7.6
Student Awards and Services	2.7	2.6	2.6	3.0	2.5
Administration	5.6	5.3	4.3	4.2	4.2
General	1.1	1.2	.7	.7	.6
Plant	11.4	11.8	12.3	12.2	12.0
Overhead Recovered on Research	(0.5)	(0.5)	(0.4)	(0.5)	(0.3)
	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>

**TABLE 5**  
**SOURCE AND DISTRIBUTION OF SPONSORED RESEARCH FUND**  
**FOR THE YEARS ENDED MARCH 31, 1984 TO 1988**

	1988 %	1987 %	1986 %	1985 %	1984 %
<b>Source</b>					
Government of Canada	67.7	68.9	62.6	69.6	67.9
Province of British Columbia	8.5	7.9	9.2	7.7	10.0
Other governments & agencies	1.7	2.5	2.8	2.2	2.3
Total governments	<u>77.9</u>	<u>79.3</u>	<u>74.6</u>	<u>79.5</u>	<u>80.2</u>
Individuals, business, foundations	21.8	20.5	24.9	20.1	19.4
Other	.3	.2	.5	.4	.4
	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>
<b>Distribution</b>					
Salaries and benefits	55.6	58.2	56.7	56.6	58.0
Travel and field trips	6.5	6.3	6.1	5.9	6.2
Operational supplies and expenses	21.6	20.4	18.1	17.7	18.2
Equipment	11.3	10.1	13.1	13.7	13.0
Other	5.0	5.0	6.0	6.1	4.6
	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>

# Raging hatred can lead women to commit fraud

By DEBORA SWEENEY

The manipulative, consuming rage exhibited by actress Glenn Close in the movie *Fatal Attraction* is shared by many women who commit fraud, says Dr. Peggy Koopman, a UBC psychologist.

"This particular form of fraud is specific to a lot of women and is associated with the clinical diagnosis of borderline personality," Koopman said. "In my opinion, Glenn Close's behavior was a different form of acting out by a borderline personality -- but the hatred experienced by these women is equally murderous."

Dr. Koopman has diagnosed and treated several women who spent time in prison for committing fraud. Each exhibited similar passive-aggressive behavior resulting from feelings of resentment, anger and revenge.

Because the courts view the motivation for committing fraud as greed,

it is not seen as a crime that requires psychological or psychiatric evaluation and the problem is either ignored or misdiagnosed, Dr. Koopman said.

"It starts with spending excessively - overdrawing the chequing account while not keeping track of the balance; to willfully writing cheques knowing there isn't money in the bank; to stealing money from someone else's bank account," she said. "It's not like taking a gun or a knife and holding somebody up, but the underlay is very violent and very angry."

The women Dr. Koopman treated spent their lives as over-achievers, trying to gain acceptance and love. After hopelessly trying to fulfill these insatiable needs, they did not see their thefts as crimes, but retaliation for the overwhelming rejection they felt.

"When they don't get what they need - and they can't because it's sort of a bottomless pit - then, they're

totally devastated," said Dr. Koopman.

As prison inmates, they obeyed the rules of the institution and got on well with guards. All received early parole dates.

Dr. Koopman is lecturing in the U.S. and Canada, hoping to educate other health-care professionals about her findings.

Therapy involves establishing boundaries for patients by forbidding them to react impulsively to situations. As well, the therapist emphasizes the patient's positive qualities, to create self-esteem.

"I think that there is a considerable number of women who are quote - 'overly emotional' - or have many destructive relationships, although otherwise they are very capable people. They may be misdiagnosed as neurotic or depressive when in fact, they should be considered for this problem instead," she said.



A Haida artisan adds texture to a cedar wall, part of a longhouse being constructed in Masset on the Queen Charlotte Islands for the new National Museum of Civilization in Ottawa. Work on six longhouses -- one from each of the major cultural groups of the Northwest Coast Indians -- will form the centrepiece of the museum's Grand Hall. The work is being subcontracted by the Museum of Anthropology.

## Computer law project seeks alternate funding

By GAVIN WILSON

A three-year project that has turned UBC into North America's leading centre for research into the use of computer in the legal profession wraps up at the end of the year.

But associate law professor Robert Franson, director of the Law and Computers Project, is looking for alternative funding to keep some aspects of the program alive.

"It is generally regarded as the best project of its type anywhere," said Peter Burns, Dean of Law. "And it is certainly the largest single legal research project at any law faculty in Canada."

The project's legacy includes a classroom with 20 computer terminals, a fully computerized legal clinic, a research lab with five computers and an outreach office in downtown Vancouver.

"We accomplished much more than we set out to do -- it's been a real success story," said Franson. "It's absolutely unique in Canada, and we're the only ones in North America doing anything close to the depth and breadth of this project."

The Law and Computers project began as a cooperative venture with IBM, which provided equipment that included 134 personal computers, a minicomputer, software and professional services with a total value of more than \$2-million. The Continuing Legal Education Society of B.C. also evolved into an important partner in the project.

Financial and other assistance for the project came from the Attorney-General's office, the federal departments of Justice and Communications and ministries of Supply and Services and Science and Technology, the

Social Sciences and Humanities Research Council and the Law Foundation of B.C. Private sector companies such as Teknowledge and Gandalf Corp. also contributed.

Outside cash and other gifts in kind were valued at \$1.5-million.

Franson said that some of the aims that were met during the project were an increase in computer literacy among students and professionals, production of computer-assisted legal instruction materials and creation of computer tools for judges and lawyers such as the sentencing database and evidence retrieval systems.

The retrieval system allows judges to call up pieces of evidence from earlier testimony with just a few keystrokes instead of a tedious search through a pile of documents.

It was developed for use by B.C. Supreme Court Chief Justice Allan McEachern (recently named Chief Justice of the B.C. Court of Appeal) during the lengthy Gitksan native land claim trial. The extremely complex case has already produced a mountain of evidence during the first year of hearings, and is expected to go on for another year.

Franson is also pleased with the results at UBC's legal clinic, which under the project has been fully computerized.

Another successful component of the project is the development of an expert system for civil law.

The system, which guides the user through a bewildering body of material directly to the most important case law, has been widely demonstrated throughout Canada and the United States.

The sentencing database project, which earned national attention in the media and in legal circles, is now in place in courthouses across B.C.

## Changes to Act

# 'Patent first, think later'

By JO MOSS

Changes to Canada's Patent Act will put pressure on university researchers to apply for patents earlier, but will also provide additional sources of funding for research, says Jim Murray, director of UBC's Industry Liaison Office.

Under Bill C-22, which goes into effect gradually over the next year, Canada is moving from a policy of first-to-invent to a policy of first-to-file.

Current legislation allows a researcher to challenge a patent application if he can prove that he, and not the patent applicant, was the first to invent.

The new first-to-file amendment will make it important for university researchers to file a patent application as soon as they believe there's a reasonable chance of commercial application, Murray said.

"You won't have time to go out and spend a year to decide whether there really is a commercial application or not. You'll have to patent first and think later."

Early patenting is also important in encouraging industry collaboration, Murray said.

"It sets a milestone and assures a company that it will share in the value added to original research if there is additional intellectual input into the project."

No firm date has been set for implementation of the bill, but it will be in place within a year, according to the federal Patent Office.

"The public has to be given fair notice. You can't spring it on them overnight," said Tony McDonough, Patent Office director.

Patent Act changes were announced by the Ministry of Consumer and Corporate Affairs last November and are intended to simplify Canada's patent system and bring it in line with systems in other countries.

At the same time as the first-to-file proviso goes into effect, Canada's current two-year grace period between disclosure and patent applica-

tion will drop to one year. Once information on an invention has been publicly disclosed, through discussion or publication, a researcher will have one year in which to file for a patent.

"The two-year waiting period is eccentric," McDonough explained. "No other country has it."

But Canada and the United States will be the only countries in the world with a one-year grace period. Other countries have none. Disclosure in North America may preclude applicants from obtaining foreign patents.

There are no plans to eliminate the one-year grace period, McDonough said.

Murray said that changes to the Patent Act also opened up additional funding sources for university research relating to pharmaceuticals.

Combining this new source of funding with existing grant programs

from the Natural Sciences and Engineering Research Council and Medical Research Council, UBC will be able to increase research and development funding to areas that are in need "by a significant amount."

A patent amendment extending the life of pharmaceutical drug patents to ten years, from four years, brought a commitment from pharmaceutical companies to spend a percentage of revenue generated from drug sales on drug-related research in Canada over the next five years. Murray estimates that figure may be close to \$50-million.

Dean of Pharmaceutical Sciences John McNeill said the faculty has been in contact with drug company representatives and discussions are under way with several companies.

## Rural doctors helped by faxed illustrations

By DEBORA SWEENEY

Medical illustrators at UBC say they now have a direct line to contracts from remote communities, thanks to their office's fax machine.

For the first time they have successfully transmitted several illustrations to a surgeon in Ontario -- which proves they can expand their services cheaply and efficiently to doctors wherever they may be, said Bruce Stewart, Art Division Coordinator in the Biomedical Communications Department.

"Aside from having a paintbrush and an airbrush, now all we need is a fax machine and a photocopier," said Stewart.

Until now, many rural doctors have had virtually no way of getting important illustrations that show the most up-to-the-minute medical procedures, Stewart added.

The idea of sending the illustrations by fax came when Dr. Richard Hawkins, a London, Ont. sports

medicine specialist, decided to write a textbook outlining the most up-to-date methods of mending athletes injured during competition. Dr. Hawkins wanted UBC to do the job -- but he wanted the job done fast.

Mailing the documents would take too long, so illustrator Frank Crymble suggested transmitting on the fax machine.

The entire project took less than two weeks, and cost about \$13 for fax and long-distance charges.

"The fax made an excellent reproduction of the illustrations," said Crymble. "The doctor had no problem recognizing the diagrams. In fact, the whole procedure was carried out with no problems at all."



Crymble

*People*

# Goldberg heads finance centre

Commerce professor **Michael Goldberg** was appointed chairman of Vancouver's new international finance centre Sept. 29, the day the centre officially opened its offices in the World Trade Centre.

Goldberg, who is on leave from UBC, is also acting executive director of International Finance Centre (IFC) Vancouver, a non-profit organization funded by the provincial government.

IFC will promote the advantages of Vancouver as one of the world's financial centres and assist potential off-shore investors to explore financial business opportunities in Canada.

Recent federal and provincial legislation provides for tax-exempt status for some financial transactions executed by registered IFC firms.

**Kogila Adam-Moodley**, an associate professor of anthropology in Social and Educational Studies, will head up the newly formed Multicultural Liaison Office (MLO).

As part of the President's Office, the MLO will explore ways in which UBC can extend its education and research resources to groups not well-represented at the university.

As part of her new duties, Adam-Moodley will work to obtain financial support for multicultural projects from sources such as the Secretary of State and the new federal Ministry of Multiculturalism.

Adam-Moodley's research has focused on ethnicity and on education in multicultural societies, including South Africa and Canada. She also has co-ordinated the Multicultural Teacher Education Program.



Woodham

The Institute of Electrical and Electronics Engineers (IEEE) Geoscience and Remote Sensing Society, recently awarded UBC professor **Robert Woodham**, and UBC graduate **Malcolm Gray**, a prize for a paper which appeared in the IEEE's international journal, *Transactions on Geoscience and Remote Sensing*.

The annual Transactions Paper Prize Award is presented to an author who has made "significant contributions" to the society's field of endeavor.

Woodham and Gray's paper, titled "An Analytic Method for Radiometric Correction of Satellite Multispectral Scanner Data," describes how remote sensing technology can be better applied to mapping B.C.'s forests.

"Remote sensing images are often not obtained under optimal conditions," Woodham explained. B.C.'s rugged complicates matters, making it difficult for the computer to differentiate between ground cover and topography.

Woodham and Gray developed a computerized method of obtaining accurate ground cover information from these images and demonstrated that it could be used reliably.

A fellow of the Canadian Institute for Advanced Research, Woodham holds a dual appointment at UBC in the forestry faculty and computer science department. His research focus is artificial intelligence and robotics.

Gray, who graduated in 1986 with a master's degree in forestry, now works as a research officer with the Surveys and Resource Mapping Branch of the Ministry of Crown Lands, in Victoria.

**Sie-Tan Chieng**, a Bio-Resource Engineering professor, has been named Agricultural Engineer of the Year by the Canadian Society of Agricultural Engineering.

The annual award goes to a society member under 40 and recognizes outstanding contributions to agricultural engineering design and development, extension and management, or research and teaching.

Chieng, who received the award at the society's annual meeting in August, was cited for "highly effective teaching and research, expanding contributions in developing international academic relations, and significant contributions to scientific societies".

Since coming to UBC in 1980, Chieng has achieved international recognition for his research in irrigation, drainage and water resources and especially for his pioneering work in computerized drainage design methodologies.

Commerce professor **Izak Benbasat** and doctoral student **Blaize Horner Reich** recently received an award from the Administrative Science Association of Canada for the best paper in the Information Systems Division.

The award was presented at the society's annual conference held recently in Halifax.

Entitled "The Use of Information

Technology for Competitive Advantage: An Examination of Information Systems Linking Companies to their Customers," the paper examined 11 Canadian companies which had built computer systems and offered them to their customers. The systems ranged from a cash management workstation for corporate treasurers to an inventory system which tracked rolls of newsprint. In each case, the system was built to gain competitive advantage in the marketplace.

Reich and Benbasat identified the technological and organizational factors which separated successful and unsuccessful companies and made recommendations for firms which are attempting to build these "customer-oriented strategic systems," Reich said.

**Norman Young**, assistant professor of stage management and production in the Theatre Department, has been appointed to the Arts Advisory Committee of the Vancouver Foundation.

The multi-million-dollar charitable foundation funds projects in several areas, including the arts.

Young, who was chairman of the B.C. Arts Board and a member of the Canada Council for several years, is chairman of the Civic Theatre Board (Orpheum, Queen Elizabeth Theatre and Playhouse). He is also a member of the Vancouver Museum Board and the Vancouver Archives Commission.

# Campus may be used as morgue in crisis

By DEBORA SWEENEY

The UBC campus could be turned into a make-shift morgue in the event of a disaster, said Bart Bastien, B.C.'s coroner of forensic odontology.

Bastien is in charge of identifying the remains of victims through their dental records.

In the event of a plane crash, an earthquake, a major fire or a mass slaying, the Thunderbird Winter Sports Centre could be converted into a morgue and faculty and dentists from the Faculty of Dentistry could be conscripted to help with identification of remains, said Bastien.

The provincial coronor's office does not need authority to move in during a crisis, he added.

The province's Attorney-General's office is drawing up a new disaster plan for B.C. which is expected to be completed by the end of November. It will include recommendations on how the UBC campus could be used, Bastien said.

UBC is a likely site because it can provide a wide range of services, added Dr. David Sweet, a forensic dentist at UBC who assisted the coroner's office in developing the plan. Sweet, who lectures at UBC, said dentistry students who receive forensic training would be familiar with protocol and procedures for identification. The university has catering facilities that could feed a large number of people involved in the identification process; it has an RCMP detachment which has access to computer information across Canada; the ice rinks at the Thunderbird Winter Sports Centre could be made into temporary morgue facilities; and UBC has the forensic technology to identify remains on-site, Sweet said.

**Faculty Recital**

David Astor, tenor; Harold Brown, piano. Free admission. For information call 228-3113. Recital Hall, Music Bldg. 12:30 p.m.

**Psychology Colloquium**

Biobehavioural Mechanisms of Chronic Pain. Dr. Michael Feuerstein, Dept. of Psychiatry, Marquette U. For information call 228-2755. Room 2510, Kenny Bldg. 12 p.m. (noon)

**Neuroscience Discussion Group**

Modulation of the Mesocorticolimbic Dopamine System by Neuropeptides. Dr. Peter Kalivas, Pharmacology & Physiology, College of Veterinary Medicine, Pullman, Wash. For information call Dr. Reiner at 228-7369. IRC Lecture Hall #1, Woodward Bldg. 4 p.m.

**Psychology Colloquium**

Magical Illusory Conjunctions and Neon Colors. Dr. Bill Prinzmetal. For information call 228-2755. Room 2510, Kenny Bldg. 4 p.m.

**FRIDAY, NOV. 4**

**Committee on Lectures**

Film and History: Images of Revolution 1918. Prof. Yvette Biro, History, New York U. For information call 228-5181. Room A-100, Buchanan Bldg. 2:30 p.m.

**Music Recital**

UBC Chamber Singers. Corland Hulberg, director. Free admission. For information call 228-3113. Recital Hall, Music Bldg. 12:30 & 8 p.m.

**Medical Genetics Seminar**

Bindings and Catalytic Domains of Cellulase: Medical Implications. Dr. Robert C. Miller, Jr. Pro-

fessor, Dept. of Microbiology & Dean, Faculty of Science, UBC. For information call 228-5311. Parentcraft Room, Grace Hospital, 4490 Oak St. 1 p.m.

**Historical Conference**

Conference on 1918-1988 in Central Europe. Opening Lecture 12:30 p.m., Buch 100. Ph. Longworth (McGill U) on historical concepts of east central Europe; sessions on Friday p.m. and Saturday on and off campus. Registration and programme available at the lecture and in front of Buch 100, Friday 2:30-4:30 p.m. For information call Dept of History at 228-5181 or 228-5557.

**SATURDAY, NOV. 5**

**THE VANCOUVER INSTITUTE**



All lectures are in Lecture Hall 2, Woodward Instructional Resources Centre at 8:15 p.m.

**Field Trip to Fraser Institute**

Student Economic Workshop: Why Markets Work. Paul Heyne, Ph.D., U. of Washington/Walter Block, Ph.D. Sr. Research Fellow & Michael Walker, Ph.D.

Exec, Fraser Institute. There will be frequent opportunities for students to ask questions and participate in discussion. \$20 includes lunch. For information call Lorena Baren 688-0221 or David Crawford at 222-4650.

**NOTICES**

**Assertiveness for Women - Basic**

Free Workshop. Tuesdays, Oct. 25, Nov. 1 and 8. An introduction to basic communication skills. Participants to learn more effective methods of expressing themselves and their needs in a wide range of social settings - from classroom to relationships. Enquiries 228-2415. Registration required. Brock 106A. 12:30 - 2 p.m.

**Duncan Lectureship**

Nov. 2-3. "The City: For God's Sake." Dr. Ray Bakke, Prof. of History & Applied Theology, Northern Baptist Theological Seminary, Chicago. For information call 228-3245. Chapel/Auditorium, Regent College, 2130 Westbrook Mall. 11:30 a.m.-12:30 p.m.

**Walter Gage Toastmasters**

Wednesdays. Public Speaking Club Meeting. Speeches and tabletopics. Guests are welcome. For information call 224-9976. Room 215, SUB. 7:30 p.m.

**Language Exchange Program**

Free service to match up people who want to exchange their language for another. For information call Mawele Shamaila at 228-5021.

**Language Bank Program.**

Free translation/interpretation services offered by international students and community in general. For information call Teresa Uyeno at 228-5021.

**International House**

E.S.L. Classes and Keep Fit Classes. All classes are free. For information call 228-5021.

**Native Expressions**

Starting Oct. 18 - every Tues. night at the Extra Extra Bistro, 3347 West Broadway, from 8:00-10:30 p.m. \$3.00 at the door. Native performers & creative artist on stage. For information call Kathy at 222-8940. Proceeds to First Nations' Student Fund. Opening night performance features David Campbell and Len George.

**UBC Fine Arts Gallery**

Oct. 4-Nov. 10. Recent Portraits: Fred Rosenberg (33 b/w photographs). Hours: Tues.-Fri. 1:00a.m.-5:00 p.m. Sat. 12 (noon) - 5 p.m.

**Keep Fit Classes**

Int'l House is looking for volunteers, certified Keep Fit instructors. Please call Vivian for further information at 228-5021.

**Special Issue on Africa and the French Caribbean**

Contemporary French Civilization is preparing a special issue on Francophone Africa and the Caribbean for 1989. Articles in English or French. 15-20 typed pages, on any contemporary culture/civilization topic in Africa or the Caribbean, must be submitted by March 1, 1989. For more information call Dr. Claude Bouygues, 228-2879.

**Teaching Kids to Share**

Mothers with 2 children between 2 1/2 and 6 years of age are invited to participate in a free parent-education programme being evaluated in the Dept. of Psychology at UBC. The 5-session programme offers child development info and positive parenting strategies designed to help parents guide their children in the development of sharing and cooperative play skills. For further information call Georgia Tiedemann at the Sharing Project 228-6771.

**Fitness Appraisal**

Physical Education & Recreation, through the John M. Buchanan Fitness and Research Centre, is administering a physical fitness assessment program to students, faculty, staff and the general public. Approx. 1 hour, students \$25, all others \$30. For information call 228-4356.

**Surplus Equipment Recycling Facility**

All surplus items. For information call 228-2813. Every Wednesday 12 noon - 3 p.m. Task Force Bldg, 2352 Health Science Mall.

**Neville Scarfe Children's Garden**

Visit the Neville Scarfe Children's Garden located west of the Education Building. Open all year - free. Families interested in planting, weeding and watering in the garden contact Jo-Anne Naslund at 434-1081 or 228-3767.

**Badminton Club**

Faculty, Staff and Graduate Student Badminton Club meets Thursdays 8:30-10:30 p.m. and Fridays 6:30-8:30 p.m. in Gym A of the Robert Osborne Sports Centre. Cost is \$15 plus REC UBC card. For more information call Bernie 228-4025 or 731-9966.

**Faculty Club Art Exhibition**

Photographs by Bill Keay. Until Nov. 11th. For information call the Faculty Club at 228-2708.

**Department of Psychology**

Individuals 18 and older are needed for a research project on changes in memory across the adult life span. For information call Jo Ann Miller at 228-4772.

**Nitobe Memorial Garden**

Open 10:00 a.m.-3:00 p.m., Oct. 12 - Mar. 16, 1989. Monday - Friday Free.

**MONDAY, OCT. 24**

**Film Showing**

The Shining, starring Jack Nicholson & Scatman Crothers. Tickets \$2.50 each. For information call the hotline at 228-3697. Sub Theatre, SUB. 7 & 9:45 p.m.

**Hewitt Bostock Lecture  
French Seminar**

Watteau et le Theatre. Prof. Francois Moureau, U. de Bourgogne, Dijon, France. For information call 228-4036. Room 826, Buchanan Tower. 10:30 a.m.

**Hewitt Bostock Lecture - French Lecture**

Les Annees 1788/89 Dans La Presse Du Temps. Prof. Francois Moureau, U. de Bourgogne, Dijon, France. For information call 228-4036. Penthouse, Buchanan Bldg. 12:30 p.m.

**Astronomy Seminar**

Kinematics of the Thick Disk. Dr. Eileen Friel, Dominion Astrophysical Observatory, Victoria. Coffee served. For information call 228-4134. Room 260, Geophysics & Astronomy Bldg. 4 p.m.

**Mech 598 Seminar**

Space Platform Based Tethers: Dynamics & Control. Prem K. Laksmanan, Graduate Student. For information call 228-4350. Room 1215, CEME Bldg. 3:30 p.m.

**Mech 598 Seminar**

An Investigation Into the Effect of Turbulence on the Combustion of Premixed Fuel Air Mixtures. Ken Das, Graduate Student. For information call 228-4350. Room 1215, CEME Bldg. 4 p.m.

**Paediatrics Seminar**

Opsono-Indifference: Or Why Macrophages Don't Care How Their Food is Served. Dr. David Speert, Division of Infectious Disease, UBC. Refreshments provided. Room D308, Shaughnessy Hospital, 4500 Oak St. 12 p.m. (noon)

**Biochemical Seminar**

Yeast Artificial Chromosomes. Dr. Maynard Olson, Genetics Dept. Wash. U., St. Louis. For information call Dr. Caroline Astell at 228-2142. Lecture Hall #4, IRC Bldg. 3:45 p.m.

**TUESDAY, OCT. 25**

**Oceanography Seminar**

Mixing in Stratified Flows. Dr. G.A. Lawrence, Dept. of Civil Engineering. For information call Dr. S.E. Calvert at 228-5210. Room 1465, Bio Sciences Bldg. 3:30 p.m.

**Statistics Seminar**

Time Series Models for Count or Qualitative Observation. Prof. Andrew Harvey, London School of Economics. For information call 228-3319. Room 102C, Ponderosa Annex C. 4 p.m.

**Education Lecture**

The Meaning of Education - The Force of Greater Learning - Ancient Chinese Method in Modern Times. Master Hsuan Hua, Prof. & Chancellor of Dharma Realm Buddhist U. Talmage, Cal. For information call Gold Buddha Monastery 684-3754 or Maria Koh 683-5509. Seminar Room 604, Asian Centre. 12:30 p.m.

**Lecture on Buddhism**

Confucianism & the Human Roots & In Search of Great Wisdom & Harmony. Master Hsuan Hua, Prof. & Chancellor, Dharma Realm Buddhist U. Talmage, Cal. For information call Gold Buddha Monastery 684-3754 or Maria Koh 683-5509. Auditorium, Asian Centre. 7 - 9 p.m.

**Health Seminar**

Unpacking Illness Meanings: Chinese & Anglo-Canadian Women with Diabetes. Dr. Joan Anderson, Nursing, UBC. Presented as part of an informal, interdisciplinary health studies exchange group. For information call 228-2258. 4th Floor Boardroom, IRC Bldg. 12:30 - 1:30 p.m.

**Christian Lecture**

John Milton and Christian Apologetics. Dr. D. Danielson, English, UBC. Coffee at 4:15. For information call 228-3112. Buchanan Penthouse, Buchanan "B" Bldg. 4:30 p.m.

**Botany Seminar**

Antihivore Mechanisms in the Plant Family Meliaceae. Don Champagne, Botany Dept., UBC. For information call 228-2133. Room 2000, Biological Sciences Bldg. 12:30 p.m.

**Merck Frosst Lecture**

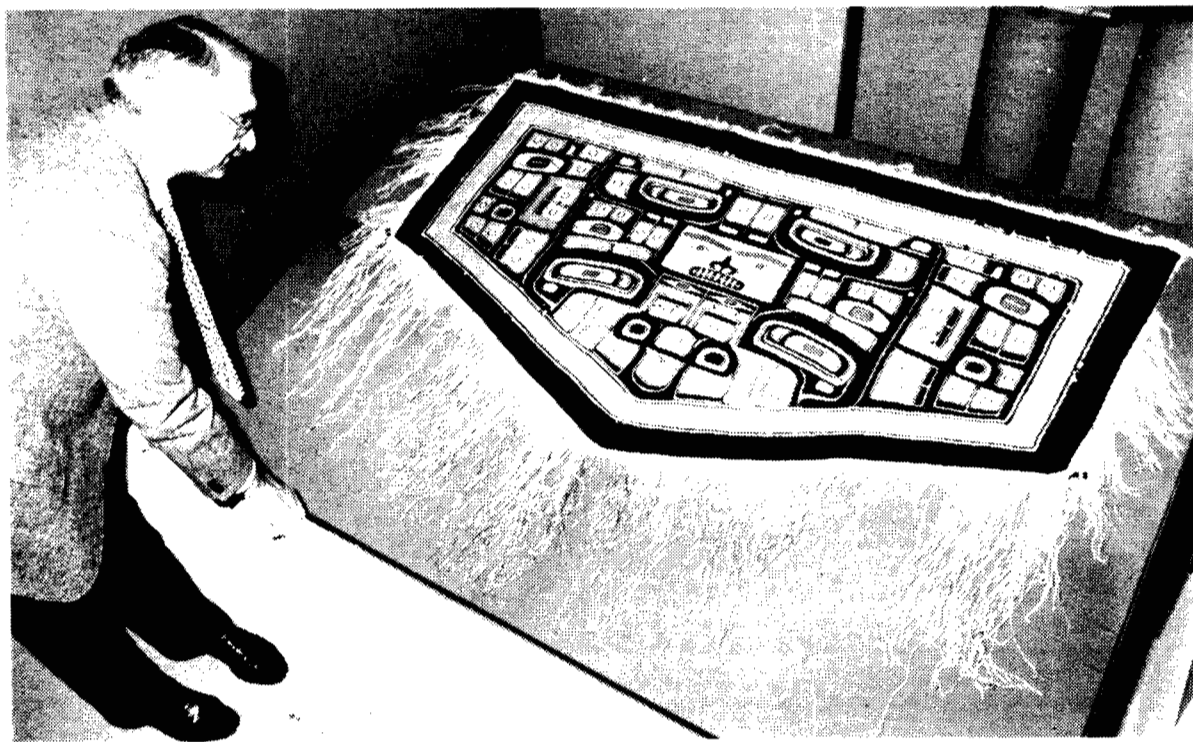
Spectroscopy of Molecular Ions: The Third Generation. Prof. Richard J. Saykally, Dept. of Chemistry, UCLA. For information call 228-3299. Refreshments served. Room 250, Chemistry Bldg. 1:00 p.m.

UBC Reports is published every second Thursday by the UBC Community Relations Office, 6328 Memorial Rd., Vancouver, B.C., V6T 1W5. Telephone 228-3131.

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Editor: Howard Fluxgold  
Contributors: Jo Moss, Paula Martin, Debra Sweeney, Gavin Wilson.

# calendar

Oct.23 - Nov.5



Christopher Miller of the Museum of Anthropology takes a close look at a new acquisition from the estate of the late artist Andy Warhol -- an Alaskan Chilkat blanket that went on display Oct. 5. The MOA also purchased a headdress from Warhol's extensive collection of American Indian Art that was auctioned in New York.

**CALENDAR DEADLINES**

For events in the period Nov.6 to Nov.19, notices must be submitted on proper Calendar forms no later than 4 p.m. on Wednesday, Oct.26 to the Community Relations Office, 6328 Memorial Road, Room 207, Old Administration Building. For more information call 228-3131. Due to production deadlines, it has been necessary to move the calendar deadline back half a day.

**WED., OCT. 26**

**Applied Mathematics Seminar**

Perturbations of Symmetric Bifurcations and Convection in Fluids. Dr. Wayne Nagata, Dept. of Mathematics, UBC. For information call 228-4584. Room 229, Mathematics Bldg. 3:45 p.m.

**Murrin Lecture**

Partnership Between Genders. Dr. Pauline Webb, Murrin Scholar in Residence. For information call 224-3722. Room A106, Buchanan A Bldg. 12:30 p.m.

**Poetry Reading**

Germanic Studies - Swedish writer Gunnar Harding reads from his poetry (in English). For information call 228-5119. Penthouse, Buchanan Bldg. 12:30 p.m.

**Noon-Hour Recital**

Hal Ott, Flute; Peter Gries, Piano. Admission \$2. For information call 228-3113. Recital Hall, Music Bldg. 12:30 p.m.

**Ecology Seminar**

The Evolution of Mammalian Life Histories. John S. Miller, Zoology, U of Western Ont. For information call 228-4329. Room 2000, Biological Sciences Bldg. 4:30 p.m.

**Merck Frosst Lecture**

Far Infrared Laser Spectroscopy of Van Der Waals Bonds: A New Probe of Intermolecular Forces. Prof. Richard J. Saykally, Dept. of Chemistry, UCLA. For information call 228-3299. Room 225, Chemistry Bldg. 2:30 p.m.

**Pharmacology Seminar**

Recent Studies of Parkinsonism & Dystonia. Dr. D. Calne, Dept. of Medicine, UBC. For information call 228-2575. Room 317, Basic Medical Sciences Bldg., Block "C". 12:30 p.m.

**English Colloquium**

Milton's Lycidas and Earlier Seventeenth Century Opera. Prof. P. Stanwood, English. For information call 228-5122. Buchanan Penthouse. Buchanan Bldg. 3:30 p.m.

**THURSDAY, OCT. 27**

**Working Breakfasts for Working Women**

A series of four working breakfasts is again being sponsored this fall by Women in Management Programs, UBC Cont. Ed.

The next breakfast is 7:30-8:45 a.m., Le Meridien Hotel, 845 Burrard Street featuring Lisa Tant, fashion editor and columnist, on fashion trends & forecasts.

Cost for the Early Riser Breakfast Series is \$64 or \$17.75 each. For information call 222-5272.

**Public Sale**

Surplus Equipment Recycling Facility. For additional information contact Vincent Grant at 228-2813. Location 2352 Health Sciences Mall, Task Force Bldg. 12 - 3 p.m.

**Ocean Sciences Seminar**

Submarine Tailings Disposal. Dr. G. Poling, Prof., Dept. of Mining and Mineral Process Engineering. For information call 228-5210. Room 202, Macleod Bldg. 3:30 p.m.

**Physics Colloquium**

USR Research in High Tc Superconductors. R. Keiff, UBC. For information call 288-3853. Room 201, Hennings Bldg. 4 p.m.

**Political Science Lecture**

Environment in Crisis: A Threat to Our Common Security. Ambassador Ola Ullsten (Sweden). For information call 228-2717. Room A100, Buchanan Bldg. 12:30-1:30 p.m.

**Music Recital**

UBC Wind Ensemble. Martin Berinbaum, Director. Free Admission. For information call 228-3113. Old Auditorium. 12:30 p.m.

**Music at the Museum**

UBC Percussion Ensemble. John Rudolph, Director. Free with Museum Admission. For information call 228-3113. Great Hall, Museum of Anthropology. 3:00 p.m.

**Engineering Meeting**

Information meeting for 1st year Engineering students (all branches except Electrical). Janet Land, Acting Director, Cooperative Education Programs. For information call 228-3022. Room 200, Computer Science Bldg. 12:30 - 1:30 p.m.

**Research Lecture**

Deindustrialization in British India: The Handloom Weavers of the Central Provinces of India, 1800-1947. Dr. Peter Harnetty, Prof., Dept. of Asian Studies. For information call 228-3881. Room 604, Asian Centre. 1:00 p.m.

**Medicine Lecture**

Hypertension: A Lifetime of Mining Salt. Dr. Sydney M. Friedman, Prof. Emeritus, Dept. of Anatomy. For information call 228-4305. University Hospital, Room G-279, Lecture Theatre, Ground Floor, Koerner Pavilion, HSCH. 12 p.m. noon

**Art History Lecture**

Sexual Politics & Public Virtue in Late 18th Century Painting. Michael Merrinan, Columbia U. For information call 228-2757. Room 102, Lasserre Bldg. 12:30 p.m.

**Psychology Colloquium**

Panic. Dr. Jack Rachman, Psychology, UBC. For information call 228-2755. Room 2510, Kenny 4 p.m.

**Schaffer Lecture**

Gene Conservation in Forest Trees. Dr. F. Thomas Ledig, U.S. Forest Service. For information call 228-2507 or 228-4166. Room 166, MacMillan Bldg. 12:30-1:30 p.m.

**FRIDAY, OCT. 28**

**Talk/Discussion**

Stories of Women from North and South told by Dr. Pauline Webb, international Journalist & Broadcaster. For information call 228-2747. Women Students' Lounge, Brock Hall, Room 223. 12:30 - 1:30 p.m.

**Literature Lecture**

Living Apart Together: Swedish and Danish Literatures from the Second World War to the Eighties. Lars-Olof Franzen, Swedish novelist, Stockholm. For information call 228-5157. Room D224, Buchanan "D" Bldg. 12:30 p.m.

**Health Care Rounds**

Hospital Utilization Evaluation. Sandi Wiggins, Inst., Dept. of Health Care & Epid. For information call 228-2772. Room 253, James Mather Bldg. 9 - 10 a.m.

**Political Science Lecture**

Why are Intellectuals More Listened to in Societies of Catholic Tradition. Prof. Andre-J. Belanger, U of Montreal. For information call 228-2717. Room A100, Buchanan Bldg. 12:30-1:30 p.m.

**Fine Arts Lecture**

Gar Lecherlich: Low-Life Painting in Rudolfian Prague. Thomas Da Costa Kauffman, Princeton U. For information call 228-2757. Room 102, Lasserre Bldg. 12:30 p.m.

**Medical Genetics Seminar**

Clinical Case Presentations. Genetic Fellows, Clinical Genetics Unit, Grace Hospital. For information call 228-5311. Parentcraft Room, Grace Hospital, 4490 Oak St. 1 p.m.

**SUNDAY, OCT. 30**

**Music Recital**

Honor Band Festival Concert. Martin Berinbaum, Director. Free Admission. For information call 228-3113. Old Auditorium. 2:30 p.m.

**MONDAY, OCT. 31**

**Cecil & Ida Green Visiting Professorships - History Seminar**

The Science of Piracy: Publishing in 18th Century France. Prof. Robert Darnton, History, Princeton. For information call 228-5675. Penthouse, Buchanan Bldg. 3:30 p.m.

**Biochemical Seminar**

Globin Gene Evolution and Regulation. Dr. Ross Hardison, Penn State U. For information call 228-3027. Lecture Hall #4, IRC Bldg. 3:45 p.m.

**Film Showing**

The Rocky Horror Picture Show. Tickets \$2.50 each until further notice. For information call the hotline at 228-3697. Sub Theatre, SUB. 7 & 9:30 p.m.

**Applied Mathematics Seminar**

Alligators: Modelling Pattern Formation Mechanisms and Concepts of Developmental Constraints in Evolution. Dr. Jim Murray, F.R.S., Dept. of Applied Mathematics, U of Washington. For information call 228-4584. Room 229, Mathematics Bldg. 3:45 p.m.

**Paediatrics Seminar**

Effect of Alcohol and Drugs on Fetal Development. Prof. Ragnar Olegard, Prof. of Paediatrics, U of Goteberg, Sweden. Refreshments provided. Room D308, Shaughnessy Hospital, 4500 Oak St. 12 p.m. (noon)

**Mech 598 Seminar**

Directional Wave Effects on Offshore Structures. Dr. M. Isaacson, Civil Eng. For information call 228-4350. Room 1215, CEME Bldg. 3:30 p.m.

**Dow Distinguished Lecturer**

Creativity and Innovation. Dr. G. Graham Allan, Dept. of Chemical Eng. & College of Forest Resources, U of Washington. For information call 224-8560. Room 101, Pulp & Paper Centre, 2385 East Mall. 2:00 p.m.

**Cancer Seminar**

Computerized Literature Searches and Data Bases. Mr. David Noble, CCABC. For information call 877-6010. Lecture Theatre, B.C. Cancer Foundation, 601 W. 10th Avenue. 12 - 1 p.m.

**TUESDAY, NOV. 1**

**Oceanography Seminar**

What Controls Plankton Production in Sub-Polar Open Seas? Dr. B.W. Frost, School of Oceanography, U of Washington. For additional information call S.E. Calvert at 228-5210. Room 1465, Bio Sciences Bldg. 3:30 p.m.

**Cecil & Ida Green Visiting Professorships - History Seminar**

The Literary Marketplace: Bookselling in 18th Century France. Prof. Robert Darnton, History, Princeton. For information call 228-5674. Penthouse, Buchanan Bldg. 3:30 p.m.

**Orientation Evening**

School of Rehabilitation Medicine. Admission, Q & A Period and Career Presentations (BCSOT & PABC). For information call 228-7771. Lecture Hall #6, IRC Bldg. 7 p.m.

**Botany Seminar**

Variation in Tidal Marsh Vegetation Along B.C.'s Coast. Dr. Gary Bradfield, Botany Dept., UBC. For information call 228-2133. Room 2000, Biological Sciences Bldg. 12:30 p.m.

**Chemistry Seminar**

Platinum Metal Emissions of the Hawaiian Volcanoes. Prof. William H. Zoller, Dept. of Chemistry, U of Washington. For information call 228-3299. Refreshments served. Room 250, Chemistry Bldg. 1 p.m.

**WEDNESDAY, NOV. 2**

**Pharmacology Seminar**

Pharmacology of Leukotrienes. Dr. Ford-Hutchinson, Sr. Dir. Pharmacology, Merck Frosst, Montreal. For information call 228-2575. Basic Medical Sciences "C" Bldg. 12 noon.

**Ecology Seminar**

Seasonal Food Limitation of Detritivorous Stream Insects. John S. Richardson, Zoology, UBC. For information call 228-4329. Room 2000 Biological Sciences Bldg. 4:30 p.m.

**Noon-Hour Recital**

Steven Dann, viola; Rena Sharon, piano. Admission \$2.00. For information call 228-3113. Recital Hall, Music Bldg. 12:30 p.m.

**THURSDAY, NOV. 3**

**Cecil & Ida Green Visiting Professorships General Lecture**

Forgotten & Forbidden Best-Sellers of Prerevolutionary France. Prof. Robert Darnton, History, Princeton. For information call 228-5675. Room A-102, Buchanan Bldg. 12:30 p.m.

**Physics Colloquium**

Status of Superstring Theory. P. Freund, U of Chicago. For information call 228-3853. Room 201, Hennings Bldg. 4 p.m.