

UBC REPORTS

Volume 42, Number 18

October 31, 1996



Pumpkin Heads

Charles Ker photo

Faculty, staff and students from the Faculty of Pharmaceutical Sciences got into the Halloween spirit with a pumpkin carving contest with proceeds going to the United Way. Heads between the pumpkins, clockwise from the left are: Judy Kotow, Joan Cosar, Wesley Wong and Marguerite Yee. UBC faculty, staff and students have raised more than \$210,000 so far in this year's campaign.

Centres to target vein and lung research

Two new Faculty of Medicine research centres — one in vascular biology and the other in respiratory disease—have been approved by Senate.

The centres are an integral part of the Medicine 2000 program, which aims to encourage academic collaboration and enhance biomedical research and education by creating partnerships that span boundaries and cross disciplinary boundaries.

Other Medicine 2000 centres that have already been approved are the Brain and Spinal Cord Research Centre, the B.C. Institute for Child and Family Health, and the Centre for Molecular Medicine and Therapeutics. Another initiative, the B.C. Cancer Research Centre, will come up for approval next year.

The Vancouver Vascular Biology Research Centre will work to create new treatments and technologies for disorders of blood vessels and other surfaces that come in contact with the blood.

Heart disease and blood vessel disorders are the leading causes of death and disability in Western society, although recent medical advances have created new opportunities for the prevention and cure for these diseases.

The centre will bridge the gap between basic research and its clinical applications by creating a synergy among UBC, St. Paul's Hospital, the

See **CENTRES** Page 2

Mother's quilt becomes cloth canvas for cancer

by Stephen Forgacs

Staff writer

A quilt undertaken by UBC School of Nursing alumna Judy Reimer as a gift for her children has taken on a greater meaning.

Reimer was diagnosed with breast cancer in 1990, and in 1993, when she discovered the cancer had spread, began quilting.

"I felt that I wanted to leave something of beauty behind for my kids," Reimer says.

By 1995 her quilting had evolved into a public awareness project called the Life Quilt for Breast Cancer Project.

Three quilts with large centre panels surrounded by 130 smaller quilted squares make up the project. Contributed by breast cancer survivors, their friends and families, the squares express their thoughts and experiences with the disease.

"The quilts are a metaphor for community and for people working together," Reimer says. "What we're looking for is people across Canada who have in some way been touched by breast cancer to share their stories with us."

One quilt was displayed recently at the Diane Farris Gallery in Vancouver in recognition of Breast Cancer Awareness Month.

Reimer says the foundation of the project is to examine the practical sup-

port for women with breast cancer that currently exists, identify gaps and then work toward filling those gaps.

The National Cancer Institute of Canada estimates that in 1996, 18,600 new cases of breast cancer will be diagnosed and 5,300 women will die from it. In 1996 in British Columbia alone, 2,800 women will be diagnosed with breast cancer, and it will claim about 600 lives.

The painted scenes on the quilts' centre panels, hand painted by Coquitlam artist Gay Mitchell, represent different stages or ideas associated with breast cancer. The first panel, *Cut in Prime*, is an impressionistic portrait of clear-cut forest, representing destruction. The second panel, *Call to Rebirth*, depicts the once clear-cut forest covered by new vegetation, while the third panel, *Green Canopy*, depicts the new forest canopy and expresses regrowth, integration and healing.

Anyone interested in becoming involved with the Life Quilt as a volunteer, supporter or contributing quilter can contact the Life Quilt for Breast Cancer Project care of the Vancouver Women's Health Collective, 219-1675 W. 8th Ave, Vancouver, V6J 1V2, or telephone (604) 736-4234. A quilting kit with instructions, backing and batting is available from the project to ensure uniformity.

Yesterday's grads give to students of tomorrow

When 500 members of UBC's class of 1946 got together in June, they decided they wanted to do something more for the university, and for future generations of students.

The Class of '46 decided to create a student endowment, and in so doing have

set a trend that is drawing the attention of other alumni classes as well as university departments and faculties that are reaching landmark dates.

"We are hoping that the idea of providing scholarship funds will be adopted by future classes when they hold their reunions," said Dick Caldecott, a member of

the Class of '46 and a former dean of the College of Biological Sciences at the University of Minnesota.

UBC Annual Fund Manager Geraldine Dunnigan said the interest graduates and departments have shown

See **FUND** Page 2

Inside

Future File

3

Offbeat: Sustainable Development researchers look at life in 2030

Educated Exchange

13

International exchange gives Commerce students a global footing

Software Savvy

15

Campus works: Software puts information in administrative staff hands

Stage Stuff

16

Profile: Even underwear has an afterlife in Sherry Milne's profession

Letters

University not a student day care

Editor:

David Abbott questions whether UBC's Computing Services should permit access to explicitly sexual images and news groups (*UBC Reports*, Oct. 17).

UBC is not a day-care centre. Students shouldn't be here if they lack the maturity to decide for themselves how much time to spend reading alt.sex.bestiality, and how much studying the reproductive anatomy of the frog.

Rosie Redfield
Zoology

Fund

Continued from Page 1

in creating endowments to mark occasions such as reunions and anniversaries prompted the addition of an Anniversary Giving category to the Annual Fund campaign. Other Annual Fund appeals include the Alumni Appeal, the Parents Appeal, the Class Act Appeal, the Faculty and Staff Appeal and the Wesbrook Appeal.

"Anniversary Giving not only helps to immortalize classes, it can also serve to commemorate milestones of different faculties and departments on campus," Dunnigan said.

The Engineering Physics Program celebrates its 50th anniversary next year and is planning a gift to mark the occasion.

Last year's Annual Fund campaign raised \$1.5 million and student callers have already started making a dent in this year's campaign goal of \$1.6 million. The deans of four faculties have joined forces with their students in contacting faculty alumni as part of the Alumni Appeal. Last year 17,600 alumni contributed \$6.8 million to UBC, with 16,000 of those alumni giving more than \$1 million through the Annual Fund.

To encourage more donors at leadership levels, the Annual Fund has introduced two new annual levels of recognition: the Trekkers level, for donors who give between \$250 and \$499, and the Clock Tower Circle for gifts of \$500 to \$999. So far more than a dozen new faculty and staff donors have joined the Annual Fund at the Trekkers level.

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LETTERS POLICY

UBC Reports welcomes letters to the editor on topics relevant to the university community. Letters must be signed and include an address and phone number for verification. Please limit letters, which may be edited for length, style and clarity, to 300 words. Deadline is 10 days before publication date. Submit letters in person or by mail to the UBC Public Affairs Office, 310 - 6251 Cecil Green Park Road, Vancouver B.C., V6T 1Z1, by fax to 822-2684 or by e-mail to janet.ansell@ubc.ca.

Centres

Continued from Page 1

Heart and Stroke Foundation of B.C., the B.C. Transplant Society and potential partners in the pharmaceutical and biotechnology industries. It will also enhance graduate programs in the field.

The Respiratory Disease Centre will be a centre without walls within the university and its affiliated hospitals that aims to solve some of the many problems that threaten respiratory health around the world, which are among the leading causes of premature death and disability in our society.

The centre's initial efforts will focus on six established research strengths: inflammatory diseases of the lung, such as asthma; pulmonary infectious disease with special reference to the effects of AIDS; occupational and environmental lung disease; sleep disordered breathing; thoracic imaging; and clinical trials.

The centre will use the latest telecommunications networks to link researchers at different sites, allowing real-time sharing of images, video, voice and other data.

Directors for both centres will be appointed at a later date.

Remember Nov. 11

Members of the university community will gather in War Memorial Gym Nov. 11 for UBC's annual Remembrance Day service.

"Our audience consists of students, staff, veterans and the public," Event Co-ordinator Eilis Courtney said, adding that anyone is welcome at the service.

UBC President David

Strangway will address the assembly and conduct an inspection of the troops at 10:15 a.m. before the ceremony gets underway at 10:45 a.m. Wreaths will be laid while a piper plays, and a string quartet from the School of Music will play during the ceremony. Last year 350 people attended the ceremony.

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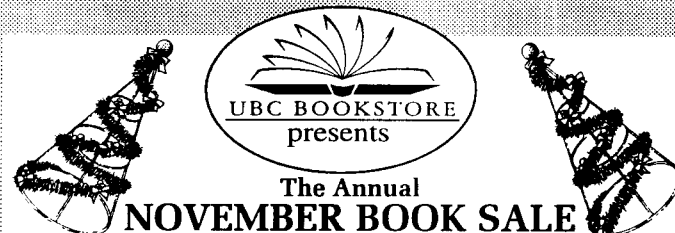
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The understanding of how genes contribute to disease is changing the face of medicine and the pharmaceutical industry. The Canadian Genetic Diseases Network, comprised of world leaders in molecular and clinical genetics research, has an extensive track record in launching new partnerships and commercial ventures. Such initiatives are designed to take advantage of advances in this area to derive new therapeutic and diagnostic products.

We are searching for a manager to participate in and guide the formation of new commercial ventures and partnerships in this emerging field. The ideal candidate will have knowledge of the bio-medical field, and understanding of technology transfer as well as experience in the planning and financing of new ventures. The successful candidate will be challenged with the responsibility of working nationally with creative scientists, entrepreneurs, and investors to identify new opportunities to apply world-class science to health care. Communications, negotiation, and marketing skills will be important in this position. Compensation will be commensurate with experience.

Submit all applications, in confidence, by November 15th, 1996 to:

Canadian Genetic Diseases Network
Room 351 - 2125 East Mall
Vancouver BC V6T 1Z4
Fax: (604) 822-7945
[No calls please]



Trick or treat?

On Oct. 31, UBC students will be trick or treating in Point Grey and Kitsilano for the Food Bank. Please give generously.



UBC REPORTS

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John Chong photo

Prof. Julian Davies, right, presents federal Industry Minister John Manley with a small test tube containing synthesized DNA. This particular DNA sample, when translated into amino acids using the genetic code, would spell out the minister's last name.

UBC spin-off probes bugs for new drugs

by Charles Ker

Staff writer

Prof. Julian Davies ushered Canada's Minister of Industry into the invisible world of microbes earlier this month at the launch of his drug discovery company, TerraGen Diversity Inc.

"We are in the business of the invisible," Davies told the Hon. John Manley. "We are exploring the last great frontier left on the planet."

Davies, TerraGen president and head of UBC's Dept. of Microbiology and Im-

munology, gave Manley a tour of TerraGen's headquarters during the minister's first official visit to campus. Manley lauded TerraGen as typifying what his ministry is trying to do with Technology Partnerships Canada (TPC), a program focussed on fostering cutting-edge environmental technologies.

As the basis for all of Earth's ecosystems, Davies argues that the microbiological environment of bacteria and fungi remains virtually untapped. This is due to the fact that scientists have so far been able to grow, or culture, less than one per cent of the world's microbes. Davies' research has come up with a novel method for getting at the remaining 99 per cent of unculturable bacteria.

Considering that there are about 5,000 species of microbes in any given handful of soil, the implications for scientific discovery seem unlimited, particularly in the area of pharmaceuticals.

Davies, a world leader in the field of antibiotics and their function, points out that most antibiotics are derived from compounds drawn from laboratory-grown microbes. As more and more

strains of bacteria build resistance to multiple antibiotics, the need for new kinds of antibiotics is acute.

"Where are we going to get new compounds from?" asks Davies. "From the microbes or bugs we can't grow."

Davies says TerraGen research fits neatly into the federal government's plan of attack on pollution through improved water treatment systems, enhanced soil quality and the restoration of industrial waste water. Using direct cloning methods, TerraGen scientists have identified new industrial enzymes that may replace

or supplement existing processes which use bacteria to degrade toxic substances. The professor says the full biochemical potential of microbes can be realized by isolating genes with useful enzyme characteristics

encoded in microbial DNA.

Processes developed by TerraGen enable researchers to screen soil samples for unculturable microbes and extract their DNA. The DNA is then inserted into surrogate hosts which, in turn, express genes providing a range of enzymes with sensitivity to heat and cold, acid resistance and other intriguing traits.

TerraGen is one of seven UBC spin-off companies to set up shop in the Gerald McGavin Multi-Tenant Facility located at the corner of East Mall and Agronomy Road.

The building was constructed by Discovery Parks Inc. to provide economical lab and office space on campus.

UBC's University-Industry Liaison Office (UILO) was instrumental in TerraGen's start-up. As the link to UBC's research resources, the office negotiates all research contracts with industry and commercializes the university's research discoveries.

To date, the UILO has overseen the creation of 72 spin-off companies.

"We are in the business of the invisible."

—Prof. Julian Davies

Alumni achievements marked at gala dinner

The Alumni Association and Athletic and Sport Services Dept. are joining forces to host a gala dinner saluting the achievements of UBC graduates.

The dinner will honor winners of the UBC Alumni Awards and inductees into the UBC Sports Hall of Fame.

The Alumni Awards recognize nine individuals for their outstanding achievements. Among those being honored this year are Alzheimer's researcher Prof. Emeritus Edith McGeer, one of the founders of UBC's Alma Mater Society, Evelyn Lett, and former head of Athletics, Bob Hindmarch.



McGeer

Inductees into the university's Sports Hall of Fame, which salutes the individuals and teams who have contributed to the university's long history of sports excellence, include Father David Bauer and the 1974/75 men's basketball team.

One individual, 10-time Big Block winner and former Alumni Association president Charlotte Warren, is doubly honored. Inducted into the Sports Hall of Fame, she will also be awarded the Blythe Eagles Volunteer Service award from the Alumni Association.

With its theme, Celebrating Excellence Through Achievement, the 1996 UBC Alumni Achievement and Sports Hall of Fame Dinner will be held Monday, Nov. 18 at the Hyatt Regency hotel. Between 800 and 1,000 people are expected to attend.

The events will be hosted by journalist Allan Fotheringham and educator Rick Hansen is the keynote speaker. Both are UBC graduates. Dinner chair is UBC Chancellor William Sauder.

Among the many prizes that will be awarded to dinner-goers are a \$12,000 trip to London and Berlin on the Concorde, a flight for two

anywhere in Western Canada Air Canada flies, and the use of the Molson Suite for a Thunderbirds hockey game. Two Grizzlies tickets will be given away at each table.

Net dinner proceeds will be used to support UBC Alumni and Athletic scholarships, bursaries and development. BC TEL is lead sponsor of the event.

Tickets for the dinner are \$125 plus tax. For more information, call event organizers Portfolio at 685-4888, Athletics at 822-8205 or the Alumni Association at 822-3313.

Pollution research gets boost from federal funds

by Stephen Forgacs

Staff writer

The Pulp and Paper Research Institute of Canada (PAPRICAN) Vancouver laboratory has undertaken a major research project to develop technologies that eliminate pulp and paper mill pollution at the source.

The project, recently announced by federal Industry Minister John Manley at the laboratory in UBC's Discovery Park, will see up to \$9 million in repayable contributions invested by the federal government. The pulp and paper industry is contributing an additional \$27 million.

Jim Wearing, associate director at PAPRICAN's Vancouver laboratory, said the project will further encourage the efforts of a number of UBC researchers who work in close collaboration with PAPRICAN.

"We feel that we can't do everything," Wearing said. "So if we can get Canadian researchers working on the problems, particularly at UBC where we try to encourage work on the longer term and more fundamental issues, their research complements the work we're doing."

PAPRICAN estimates that the project, including research and development, will total \$88.5 million over five years.

Described by the Canadian Pulp and Paper Association as "one of the largest research projects of its kind in the world," the project will look into the development of closed cycle technologies. The strategic aim of the research is to achieve paper

mills which generate virtually no effluent.

Among the UBC researchers involved will be Chemical Engineering Assoc. Prof. Peter Englezos, who studies the behavior of ions in pulp and paper process streams; Civil Engineering Assoc. Prof. Eric Hall, who works on waste water treatment; and Chemical Engineering Prof. Paul Watkinson, who is working on converting lignin—a byproduct of the pulp process—into a fuel.

Prof. Martha Salcudean, who holds the Weyerhaeuser Industrial Research Chair in Computational Fluid Dynamics, has led mathematical modelling of processes that continue to make an important contribution to research in the area, Wearing said.

Salcudean said the funding is a step in the right direction.

"It's very important for this industry to respond positively to environmental concerns," she said. "And I'm a strong believer that the forest industry is very important to Canada, and particularly to B.C. Any work that would increase our competitive positions vis-à-vis other countries is of extreme importance."

PAPRICAN, a non-profit research and educational organization, operates research laboratories in Vancouver and Pointe Claire, Quebec, in addition to educational and postgraduate research programs at McGill University, the École Polytechnique in Montreal, and the UBC Pulp and Paper Centre.

Offbeat

by staff writers



In the recently released book *Life in 2030*, John Robinson and colleagues at UBC's Sustainable Development Research Institute (SDRI) outline a scenario of what Canada might look like in the future. Features of that future outlined below are based on the assumption that Canadians make a determined effort to employ the most environmentally

benign techniques either available or under development in 1990.

- Canada's population is 30 million
- divorce is down slightly, fertility has remained at the 1990 level of about 1.7 children, and there are more non-traditional families
- there is full employment and the average formal work week is down to 27.5 hours
- almost everyone does voluntary work and there has been a boom in private bartering and work for payment-in-kind
- all forms of social security have merged into guaranteed annual income
- health care employs twice as many people as in 1990
- alternative medicine is far more common and most people are treated at home
- tobacco has virtually disappeared
- almost everyone has a "superbox" at home: a combined fax, computer, TV, and videophone
- most households have one small electric car for local use and rent a larger vehicle fueled by either hydrogen or plant alcohol for intercity travel
- although most people still have personal video and audio equipment, most other domestic durables are rented or borrowed from "common goods stores"
- energy use and environmental emissions have dropped significantly (carbon dioxide emissions are down 63 per cent from 1990 levels)

Calendar

November 3 through November 16

Lecture
Byzantine Iconography. Eva Zogaris, art historian. MOA, 7:30pm. Call 822-5087.

DOW Lecture in Analytical Chemistry
Life In The Fast Lane: High Speed Separations, Spectroscopy, And Imaging Of Biomolecules. Prof. Michael D. Morris, U of Michigan. Chemistry 250 (south wing), 1pm. Refreshments at 12:40pm. Call 822-3266.

Joan Carlisle-Irving Fine Arts Lecture Series
Popular Modernisms And Cultural In/Subordination. Bruce Barber, artist. Lasserre 102, 5:30pm. Call 822-2757.

Reading
Uncertainty. Michael Larsen. Buchanan B-232, 12:30pm. Call 822-6403.

Statistics Seminar
Loss Of Efficiency In The Quasi-Likelihood Analysis Of Aggregated Data In Random Effects Poisson Processes. Prof. Charmaine Dean, SFU. Old Computer Science 301, 4-5:30pm. Refreshments. Call 822-0570.

Wednesday, Nov. 13

Centre for Research in Women's Studies and Gender Relations Seminar Series
KVSL Narasamamba, folklorist. 1896 East Mall, 3:30-5pm. Call 822-9171.

Respiratory Research Seminar Series
Beta Agonists: Friend Or Foe? Dr. M. FitzGerald, Medicine. St. Paul's Hosp, Gourlay conference room, 5-6pm. Call 875-5653.

Continuing Studies Lecture Series
The Painted Lady: The History Of Fashionable Makeup And Hair-dressing. Ivan Sayers. Hotel Georgia, 9:30-11am. Continues Nov. 20, \$25; seniors \$20. Call 822-1450.

Microbiology & Immunology Seminar Series
Multivalent pIII Phage Display Libraries: Issues And Applications. Daniel Wilson. Wesbrook 201, 12-1pm. Call 822-3308.

Modern European Studies Colloquium Series
Adelbert Von Chamisso: A German Romantic Poet And The European Dimensions Of His Work. Edward Mornin, Germanic Studies. Buchanan penthouse, 3:30pm-5pm. Call 822-5969.

Your UBC Forum
Teaching and Learning. Vice-president Maria Klawe, moderator. SUB conversation pit, 12:30-2pm.

Ecology and Centre for Biodiversity Research Seminars
Species-Area And Distribution-Abundance Relationships United. Ilka Hanski, U of Helsinki. Family/Nutritional Sciences 60, 4:30pm. Refreshments at 4:20pm, Hut B-8. Call 822-3957.

Cultural and Media Studies Interdisciplinary Group
Disability And Health Care: Knowledge, Narratives And Ruling Relations. Marie Campbell, Human Social Development, UVic, Green College, 5:30pm. Call 822-6067.

Noon Hour Concert
Ellen Silverman and Barrie Barington, duo piano. Music recital hall, 12:30pm. Admission \$3. Call 822-5574.

Thursday, Nov. 14

Flu Vaccine
For UBC Faculty And Staff. Student Health Services, 12-3:30pm. \$10. Call 822-7011.

Biochemistry and Molecular Biology Seminar
Pathways For Macromolecules Into Macrophage Cytoplasm. Joel Swanson. Scarfe 100, 3:45pm. Refreshments at 3:30pm. Call 822-3178.

Law and Society Seminar Series
Challenging The Public/Private Divide: Feminism And Socio-Legal Policy. Susan Boyd, Law; Nitya Iyer, Law; Jennifer Koshan, Law; Claire Young, Law; Marlee Kline, Law; Amanda Ocran, Geography; Dorothy Chunn, Criminology, SFU. Green College, 7:30pm. Call 822-6067.

Science First! Lecture Series
Why We Should Continue To Watch The Skies: The Hidden Impact Of Astronomy On Your Life. Jaymie Matthews, Physics and Astronomy, IRC#2, 1-2pm. Call 822-5552.

Young Alumni Connections Lecture/Slide Show
Three Seasons Of The Wind: Six Weeks By Canoe On The Thelon River. Kathleen and Michael Pitt. Cecil Green, 7:30-9:30pm. Admission \$5. Refreshments. Call 822-8917.

Continuing Studies Lecture Series
The Nature Of Things: Lucretius' Didactic Poem. Carl Johnson. Hotel Georgia, 9:30-11am. Continues Nov. 21, \$25; seniors \$20. Call 822-1450.

Pharmaceutical Sciences Seminar
Is There A Role For Antibiotics In Rheumatoid Arthritis? Dana Cole, PharmD student. Cunningham 160, 1-2pm. Call 822-4645.

Pharmaceutical Sciences Seminar
Finasteride Vs. Tamoxifen In BPH. Pat Gerber, PharmD student. Cunningham 160, 1-2pm. Call 822-4645.

Genetics Graduate Program Seminar
Dissecting Chromatin Structure Using Position-Effect Variegation In Drosophila. Tom Grigliatti, Zoology. Wesbrook 201, 4pm. Refreshments. Call 822-8764.

Environmental Engineering Seminar
Formation Of Disinfection By-Products In The Drinking Water Distribution System. John Brereton, PhD candidate. CEME 1215, 3:30-4:30pm. Refreshments. Call 822-2637.

HR MacMillan Lecture Series
Metapopulations. Ilka Hanski, U of Helsinki. MacMillan 166, 2:30-3:30pm. Call 822-9695.

Architecture Lecture
Chris Genik: On His Work. Chris Genik, Los Angeles. Lasserre 102, 6pm. Call 822-2779.

CICSR Distinguished Lecture Series
Modelling Intelligent Systems: Languages, Automata, And Differential Equations. Roger Brackett, Harvard U. CICSR/CS 208, 4-5:30pm. Refreshments. Call 822-6894.

Poetic Persuasions
Readings Of Original Works And Open Forum. Green College, 8pm. Call 822-6067.

Opera Panel Discussion
Janacek's Jenufa. Susan Bennett, Vancouver Opera; Milena Janda, Vancouver Opera; and Andrew Busza, English. Buchanan penthouse, 12:30-1:30pm. Call 822-4060.

Physics and Astronomy Colloquium
The Dirac Comb: Scattering From A Locally Periodic Potential. David Griffiths, Reed College. Hebb theatre, 4pm. Refreshments at 3:45pm. Call 822-3853.

Concert
University Singers. James Fankhauser, director. Music recital hall, 12:30pm. Call 822-3113.

Friday, Nov. 15

Pediatrics Grand Rounds
Studies Of Mice And Men: The Development And Utility Of A

Notices

Bookstore Book Sale
To Nov. 16. Sale includes large variety of academic titles. UBC Bookstore, 9am-5pm weekdays, 10am-5pm Saturdays. Closed Nov. 11. Call 822-2665.

Art Exhibition
Chinese paintings by members of the Blue Cloud Artists Association. To Nov. 10. Asian Centre auditorium, 10am-6pm. Call 649-6782.

Frederic Wood Theatre
Opera. Hansel and Gretel. Nov. 13 to 30. 8pm. Nov. 28, additional performance, 12:30pm. Admission \$8-\$14. Two for one preview, Nov. 13. Refreshments. A co-production of the Depts. of Theatre and Film, Creative Writing, and the School of Music. Call 822-2678.

Volleyball
Faculty, Staff and Grad Student Volleyball Group. Every Monday and Wednesday, Osborne Centre, Gym A, 12:30-1:30pm. No fees. Drop-ins and regular attendees welcome for friendly competitive games. Call 822-4479 or e-mail: kdes@unixg.ubc.ca.

Fun and Fitness
UBC Community Sport Services offers adult ballet, gymnastics and ice hockey classes for beginners. No experience is necessary. For more information call 822-3688.

Dorothy Somerset Studio
The Firerisers by Max Frisch. Nov. 6 to 16. Directed by Neil Cadger. 8pm. Call 822-2678.

Morris and Helen Belkin Art Gallery Exhibition
Tuesday - Friday: 10am-5pm; Saturday, 12-5pm. 1825 Main Mall. Call 822-2759.

Surplus Equipment Recycling Facility
Weekly sales of furniture, computers, scientific etc. held every Wednesday, noon-5pm. SERF, Task Force Building, 2352 Health Sciences Mall. Call 822-2582 for information.

Faculty Development
Would you like to talk with an experienced faculty member, one on one, about your teaching concerns? Call the Centre for Faculty Development and Instructional Services at 822-0828 and ask for the Teaching Support Group.

Mouse Model For Hurler Syndrome. Dr. Lorne A. Clarke, GF Strong auditorium, 9am. Call 875-2307.

Chemical Engineering Seminar
Modelling And Predictive Control Of Bioprocesses For Recombinant Protein Production. Jason Dowd, grad. student. Chemical Engineering 206, 3:30pm. Call 822-3238.

Pharmaceutical Sciences Seminar
Regulation Of Nitric Oxide Synthase(s) In Cardiomyocytes. Lakshman Sandirasegarane, IRC#3, 12:30-1:30pm. Call 822-4645.

Occupational Hygiene Seminar Series
Determinants Of Exposure To Flour Dust In Bakeries. Igor Burstyn, grad. student. Vancouver Hosp/HSC, Koerner Pavilion G-279, 12:30-1:30pm. Call 822-9595.

Mathematics Colloquium
Mathematics On The Web.

Johnathan M. Borwein, SFU. Math 100, 3:40pm. Refreshments at 3:15pm, Math Annex 1115. Call 822-2666.

Medieval and Renaissance Symposium

Issues Of Evidence. Hector Williams, Classics; Sam Wong, English; Iain Higgins, English; Heather MacNeil, Law; Anthony Dawson, English; David Measday, Physics; Rhoda Friedrichs, History, Douglas College; and respondent David Harris Sacks, History, Reed College, Green College, 4:30pm. Call 822-6067.

Saturday, Nov. 16

Vancouver Institute
Leonard Cohen: "The Only Tourist In Havana." Prof. Ira Nadel, English, IRC#2, 8:15pm. Call 822-5675.

Bookstore Author Series
Eenie Meenie Manitoba. Bob Heidbreder, children's author. Bookstore, 1:30-2:30pm. Call 822-2665.

Women Community Builders
The Faculty Women's Club seeks to build community among the academic faculty and professional staff at UBC, its affiliated Colleges, the Library, Health Sciences Centre, and research centres on campus. It brings together women, connected to the university either through their work or that of their spouses, for social activities, lectures and the common goal of raising scholarship funds. Whether you have neglected to join over the years, are a post doctoral affiliate, or are here on sabbatical, come out and get involved in your community! You will be made welcome. Contact president Jean McCutcheon, 261-3275, vice-president Jenny Russell, 224-4097.

Studies in Hearing and Communication
Senior (65 years or older) and junior (20-30 years) volunteers needed. Participants will attend up to three one-hour appointments at UBC. Experiments will examine different aspects of hearing and communication abilities. Honorarium for some studies. Please call The Hearing Lab, 822-9474.

Clinical Research Support Group
The Clinical Research Support Group which operates under the auspices of the Dept. of Health Care and Epidemiology provides methodological, biostatistical, computational and analytical support for health researchers. For an appointment please call Laurel Slaney at 822-4530.

Garden Hours
Nitobe Memorial Garden open 10am-2:30pm weekdays only. Botanical Garden and the Shop-in-the-Garden are open 10am-6pm daily (including weekends). Call 822-9666 (gardens), 822-4529 (shop).

Parents with Babies
Have you ever wondered how babies learn to talk? ... help us find out! We are looking for parents with babies between 1 and 14 months of age to participate in language development studies. If you are interested in bringing your baby for a one hour visit, please call Dr. Janet Werker's Infant Studies Centre, Department of Psychology, UBC, 822-6408 (ask for Dawn).

Herpes Zoster (Shingles) Study
Participants required to take part in clinical dermatology trial at Division of Dermatology, 855 West 10 Avenue. Requirements, 50 years of age and older, within 72 hours of onset of first skin rash. Maximum 13 visits over 24 week period. Free medication and honorarium given. For further information call 875-5296.

Diabetes 1997 Conference
The Young Diabetic. Interprofessional Continuing Education Conference will take place Friday, April 4 and Saturday, April 5, 1997, in Vancouver, for all health professionals interested and involved in diabetic care. For further information call 822-2626.

Centering Pregnancy Drop-in
The Centering Pregnancy Drop-in, run by UBC Nursing Faculty and students in collaboration with West-Main Health Unit, offers support and information about pregnancy and birth to women who are pregnant or contemplating pregnancy. Wednesdays, 10-11:30am, Acadia Fairview Commons Block. For information call 822-7470.

Boomerang Family Research
The Counselling Psychology Department is looking for adults who have returned home to live. They and their parents are invited to participate in a study focusing on the experience, inter-personal relations and responses to this change in the family. Involves confidential interviews. Please call 432-1915 for more information.

UBC Zen Society
Meditation sessions will be held each Monday (except holidays) during term, in the Tea Gallery of the Asian Centre from 1:30-2:20pm. All welcome. Please be punctual. Call 228-8955.

Parent Care Project
Daughters/daughters-in-law who are caring for a parent in a care facility are needed for a counselling psychology study on the challenges women face in parent care. Involves individual interviews/questionnaire. Call Allison at 822-9199.

PEMBERLEY *at* HAMPTON PLACE

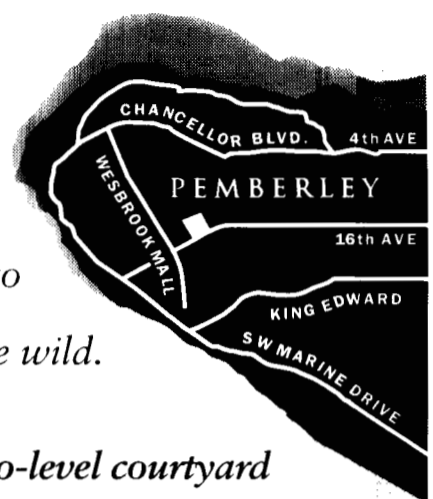
Picture the green forests of Pacific Spirit Park at your backyard. A stroll along a sun-dappled pathway. Beaches and blackberries five minutes away. Picture a special collection of charming flats



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Traditional in architecture, stylish in design with patios or decks to double as your summer living room. Come to Pemberley and you'll find Vancouver's envied lifestyle at your doorstep.

Lively 10th Avenue with its bookstores and bistros. Golf courses, mountain bike trails, tennis and racquet-ball courts, all close by. Yours at Pemberley where, each morning, you wake up to a life that borders on the wild.



Flats from \$179,900; two-level courtyard townhomes from \$295,900 (prices include GST). Presentation Centre and Display at Hampton Place, UBC. Open 12 - 5 pm daily (except Friday)

For more information call 221 ~ 1996

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NEW HOME
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THE UNIVERSITY OF BRITISH COLUMBIA

Review of Policy #20 —
Advertising of Position Vacancies



THE UNIVERSITY OF BRITISH COLUMBIA

October 31, 1996

Dear Colleagues:

UBC's Board of Governors reviews all University policies on a three-year cycle. As part of this review, we now are considering Policy #20, Advertising of Position Vacancies. Because this policy has become a subject of concern, I am seeking comments from all members of the University community on this matter.

I am interested particularly in your experiences using UBC's 1992 employment-equity advertisement in recruiting staff and faculty. Has the required statement—"UBC welcomes all qualified applicants, especially women, aboriginal people, visible minorities and persons with disabilities"—facilitated or hindered UBC's goal to hire the best candidate for the job? In light of your experiences, I also am interested in your advice on the wording: Should the University retain the current wording? If not, what wording do you suggest?

Please read the accompanying information on Policy #20, and send your comments to Vice Provost Libby Nason by November 15.

Sincerely,

David W. Strangway
David W. Strangway
President

- York University is implementing a policy of employment equity, including affirmative action.
 - Concordia University is committed to Employment Equity and encourages applications from women, aboriginal people, visible minorities and disabled persons. All things being equal, women candidates shall be given priority.
 - The University of Saskatchewan is committed to the principles of employment equity and welcomes applications from all qualified candidates. Women, people of aboriginal descent, members of visible minorities, and people with disabilities are invited to identify themselves as members of these designated groups in their applications.
 - The University of Guelph is committed to an employment equity program that includes special measures to achieve diversity among its faculty and staff. We therefore particularly encourage applications from qualified aboriginal Canadians, persons with disabilities, members of visible minorities and women.
 - The University of British Columbia welcomes all qualified applicants, especially women, aboriginal people, visible minorities, and persons with disabilities.
 - Queen's University has an employment equity program, welcomes diversity in the workplace and encourages applications from all qualified candidates, including women, aboriginal peoples, persons with disabilities, and racial minorities.
 - Memorial University is committed to employment equity.
- UBC's Commitment to Hire the Best Person for the Job*
- Two policies at UBC unequivocally state UBC's commitment to hiring the best person for the job:
- Policy #2— Employment Equity (approved 1990 and reviewed by the Board of Governors 1995) "The fundamental consideration for recruitment and retention of faculty and staff at The University of British Columbia is individual achievement and merit."
 - Policy #97— Conflict of Interest (approved 1992 and reviewed by the Board of Governors 1995) "Faculty and staff must be scrupulously fair and honest in ensuring that positions are well advertised and that appointments are offered always to the best-qualified available candidates."
- Because merit is the fundamental consideration in hiring, UBC's Policy on Employment Equity directs the University to seek as many qualified applicants as possible so that it can choose the best-qualified person from the largest pool. The purpose of the advertisement wording approved in 1992 is to increase the candidate pool.
- Range of Opinion To-date*
- Recently, the media have reported various views on UBC's advertisement wording. Some individuals express concerns about the word "especially", and propose substituting the word "including"; others want to retain "especially". Still others recommend revising the advertisement wording to include a statement to the effect that UBC hires on the basis of merit.

Background

In 1988, the University joined the Federal Contractors Program in order to maintain its eligibility to bid on government contracts. UBC's participation in the program requires that we institute special measures and accommodations in hiring, training, and promotion in order to improve the participation of designated groups—women, aboriginal people, visible minorities, and persons with disabilities—throughout the organization. Such measures are intended to enable

members of designated groups, which have been underrepresented in employment relative to their qualifications, to compete with others on an equal basis.

Current Survey of Canadian Universities

Like other Canadian universities that hold federal government contracts, UBC routinely includes job advertisement wording that refers to the four designated equity groups. Such wording differs amongst institutions; the following examples are typical of the range:



THE UNIVERSITY OF BRITISH COLUMBIA

Draft Revisions of Policies



THE UNIVERSITY OF BRITISH COLUMBIA

October 31, 1996

Dear Colleagues:

Reprinted here are four draft policies for your review.

1. The changes to the Pest Control policy have been proposed by the Department of Health, Safety and Environment, and are intended to bring the policy up-to-date with current legislative requirements. For reader convenience, deletions appear in cross-out and additions are in italics.
2. The changes to the Scholarly Activity policy arise from new requirements of the Tri-Council (federal granting agencies MRC, NSERC, and SSHRC) as well as our experience since the policy was first approved in administering the procedures. Deletions are in cross-out and additions are in italics.
3. The Commercial Enterprises policy has been broadened to include all commercial enterprises on campus, not simply the making of films. The purpose of the revisions is to ensure that, in authorizing a commercial enterprise to operate on campus through a lease or license agreement, the University retains the right to establish rules and regulations from time to time. This is necessary to ensure that such activities promote and continue to promote (or at a minimum do not conflict with) University objectives.
4. The new draft policy on sustainable development follows the policy approved in 1994 on environmental protection compliance. The sustainable development initial draft is the work of a group that has brought much thought and debate about sustainable development to its meetings over a period of three years. There was consensus of the working group that this was the best general approach for UBC to take. Members of the working group were:

- Mark Aston, Health, Safety and Environment
- Jim Atwater, Civil Engineering
- Paul Becker, Plant Operations
- Mike Brauer, Respiratory Medicine
- Jutta Brunnee, Law

- Chris Clark, Dentistry
- Simon Ellis, Wood Science
- Ron Giammarino, Commerce
- Barbara Girard, Dentistry
- Don Graham, Purchasing
- Vince Grant, Surplus Equipment Recycling Facility
- Wayne Greene, Health, Safety and Environment
- David Grigg, Campus Planning & Development
- Trina Hamilton, Student Environment Centre, SUB
- Clyde Hertzman, Health Care & Epidemiology
- Janet Land, Institute of Sustainable Development Research
- Dorit Mason, Health, Safety and Environment
- Christine Massey, Institute of Sustainable Development Research
- Peter Nault, Plant Operations
- Peter Nemetz, Commerce - Policy Analysis Div.
- Mary Jean O'Donnell, Plant Operations
- Freda Pagani, Campus Planning & Development
- Andrew Parr, Food Services - Purchasing
- Bill Rees, Community & Regional Planning
- Janice Robinson, Housing
- John Robinson, Institute of Sustainable Development Research
- Tom Ross, Commerce
- Olav Slaymaker, Geography
- Leslie Smith, Geological Sciences
- John Vanderstoep, Food Science

The cost of implementing the policy, if and when approved, is under study now. The working group, mindful of the University's financial situation, has tried to develop a structure that is the least expensive possible and that will still be effective.

Your comments on all these policy changes will be most helpful if received by November 15, 1996. Please address any suggestions to Vice Provost Libby Nason.

Sincerely,

David W. Strangway
David W. Strangway
President



THE UNIVERSITY OF BRITISH COLUMBIA

Draft Revision of Policy #85 — Scholarly Integrity

Approved: January 1995

RESPONSIBLE VICE PRESIDENT: Vice President Academic & Provost, Vice President Research

PREAMBLE:

The University recognizes that teaching, research, scholarship and creative activity 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, accountability 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 acknowledgment; 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;
- 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 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 of accurately recorded and retrievable results is of utmost importance. For instance, in many scientific departments, a record of the primary data must be maintained in the laboratory and cannot be removed.

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 *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 administration 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.

~~*As this is an internal investigative process, proceedings are conducted in private and persons alleged to have misconducted themselves are not entitled to representation by legal counsel when they meet with the Investigative Committee.*~~

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.*

The 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 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 hand them over to the Vice President Research or the Provost along with the Committee's report. The report and related records are



THE UNIVERSITY OF BRITISH COLUMBIA

Draft Revision of Policy #85 — Scholarly Integrity (cont.)

kept for a period of six years.

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, and 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 established 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 investigatory 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 de-

monstrably malicious intent are protected from reprisals or harassment. False allegations made purposefully will give lead to discipline by the individual making the allegation by the University.

Annual Report

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.

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 prescribed;
- other practices that deviate significantly from those which are acceptable as appropriate within scholarly commu-

nities:

- 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 proper recognition, 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.

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.



THE UNIVERSITY OF BRITISH COLUMBIA

POLICY ON SUSTAINABLE DEVELOPMENT

Draft #7

RESPONSIBLE: All Vice Presidents

INTRODUCTION:

"Human demands upon the planet are now of a volume and kind that, unless changed substantially, threaten the future well-being of all living species. Universities are entrusted with the major responsibility to help societies shape their present and future development policies and actions into the sustainable and equitable forms necessary for an environmentally secure and civilized world."—The Halifax Declaration

The severity of the problem has been recognized not only by universities, but also by industry. One conclusion from the Business Council for Sustainable Development, Report of the First Antwerp Eco-Efficiency Workshop, sponsored by the Commission of European Communities and the U.N. Environment Program, in November 1993, was:

"Industrialised world reductions in material throughput, energy use and environmental degradation of over 90% will be required by 2040 to meet the needs of a growing world population fairly within the planet's ecological means."

As part of its responsibility as an educational and research institution and as a signatory to both the Halifax Declaration and the Talloires Declaration by the University Presidents for a Sustainable Future, UBC provides leadership by demonstrating the means to a sustainable community on campus. UBC recognizes that just as the university contributes to a

healthy society and economy through education to build up social capital, we also need to invest in maintaining the ecological services and resources, our natural capital, upon which society depends.

UBC seeks to become a centre for teaching and learning about the skills and actions needed to manage ourselves in a sustainable way. This in turn requires responsible fiscal management that enables the university to continue to pursue these goals.

PURPOSE:

- to develop an environmentally responsible campus community that is economically viable and reflects the values of campus community members;
- to ensure integration of ecological, economic and social considerations at all levels of strategic planning and operations within the University;
- to work towards a sustainable future in cooperation with organizations such as the GVRD and the City of Vancouver;
- to assume a leadership role through practising sustainable development and instilling sustainable development values in its graduates and employees, through research, teaching, and operations.

POLICY

The University of British Columbia, including its subsidiaries and ancillary operations, is committed to improving its performance in sustainability in all areas of operations. UBC will develop appropriate standards for managing sustainability at UBC. Specific targets, priorities and timetables for achieving these objectives are developed in a consultative process

involving faculty, staff and students, as outlined in the procedures of this policy. In the process of meeting the UBC mandate for teaching and research, efforts focus on the following inter-related areas:

- UBC contributes to the protection of its environmental life support systems. This means minimizing the pollution of air, water and soil.
- UBC preserves and enhances the integrity of ecosystems at UBC through careful management, and the development and implementation of remediation measures for degraded sites as appropriate.
- UBC seeks ways to conserve resources and reduce waste. This means developing methods to minimize the energy and material intensity of university activities and reducing waste.
- UBC has information and reporting systems in support of decision making based on sustainable development principles including life cycle, social and environmental costing and accountability to stakeholders.
- UBC seeks to ensure its long term economic viability through responsible and effective management, the development of a comparative advantage in its educational and research activities, innovative methods to calculate and account for external costs, to identify cost-savings and new sources of revenue and through innovative partnerships with the larger community.
- UBC works to enhance its capacity to teach, research and practice sustainable development principles, and to increase ecological/social/economic literacy and practices among faculty, staff,

students, and the public at large.

UBC implements this policy, mindful of the need to balance ecological, social and economic imperatives, in an open and transparent decision-making process with the involvement of all stakeholders.

PROCEDURES

Ombudsperson for Sustainable Development

The Ombudsperson for Sustainable Development, reporting to the Vice President Administration and Finance and working with all sectors in the University, is responsible for focusing efforts on the objectives of the policy, promoting the development of sustainability target and action plans of individual units, and coordinating the many sustainable development activities, on-going and emerging, on campus. The Ombudsperson liaises closely with the Environmental Programs Manager and the Greening the Campus coordinator and is the chief contact with the external community about issues and advances in sustainability at UBC, providing linkages for campus and regional efforts. The Ombudsperson coordinates reporting on all related University efforts, include recording and reporting on progress (and lack of progress) and plans for long-term development. The Ombudsperson provides training and guidance to the University community and serves as the central information source about sustainability issues.

Targets and Action Plans of all Units

An action plan will be developed in all units for improving performance in key sustainability areas with clear indicators for targets, by all units, with the assistance of the Ombudsperson for Sustain-



THE UNIVERSITY OF BRITISH COLUMBIA

Draft Policy on Sustainable Development (cont.)

able Development. Plans will include evaluation guidelines, effective measures of progress, reporting mechanisms and appropriate educational support. Changes to existing practices as well as new and innovative methods are considered during the development of the plan.

Once drafted, the targets and action plans will be reviewed by the Vice President responsible for the area for approval of actions, timing and funding. Administrative heads of unit are responsible for ensuring communication about the goals of the unit's plan and its implementation once approved. Administrative heads report on their progress annually to the Vice President responsible for the units and send a copy to the Ombudsperson for Sustainable Development Programs for publication of an annual report to the

Board of Governors.

Target and action plans are reviewed by the unit every two years, taking into account new technologies and opportunities. The Ombudsperson establishes management systems sufficient and appropriate to UBC in order to develop plans and meet goals for sustainability approved by the Board of Governors.

Education about Sustainability

A coordinating mechanism for enhancing educational efforts about sustainability is the Greening the Campus (GTC) program. The Ombudsperson for Sustainable Development works closely with the GTC Coordinator.

Advisory Committee on Sustainable Development and Greening the Campus

The Ombudsperson and the Greening

the Campus program are advised by a committee composed of representatives (faculty, staff and students) of key areas across campus. The Advisory Committee on Sustainable Development and Greening the Campus is advisory to the Vice President Administration and Finance for operational matters and to the Vice President Academic & Provost for academic matters.

The committee's responsibilities are:

- to advise on the Greening the Campus program, in which students, staff and faculty engage in projects to enhance sustainability of UBC operations and to increase knowledge of and develop solutions to sustainability issues
- to foster the integration of knowledge and issues about sustainability into all

relevant scholarly and research activities, the curriculum, and student activities of the University

- to enhance the capacity of academic units to teach and practice sustainable development principles
- to assist the Ombudsperson for Sustainable Development to communicate the goals of the sustainable development policy and develop support for them within both operational and academic units of the University
- to report on Greening the Campus activities annually to the Ombudsperson for Sustainable Development, so that the activities and accomplishments of the Greening the Campus program can be reflected in reports to the Board of Governors.



THE UNIVERSITY OF BRITISH COLUMBIA

Draft Revision of Policy #98 — Commercial Enterprises on Campus

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, including 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 with the application of ethical and efficient procedures.

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 authorized 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 that is not operated by the University of British Columbia.

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 impact on the environment describes activities that promote the reduction, reuse and recycling of materials and equipment; reduce the 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.



THE UNIVERSITY OF BRITISH COLUMBIA

Draft Revision of Policy #12 — Pest Control

Approved: March 1993

RESPONSIBLE VICE PRESIDENT: Vice President Administration & Finance

PURPOSE:

To promote the use of biological techniques for pest control and to regulate use of pesticides on land sites and buildings under the control of the University.

POLICY:

Pests will be controlled whenever possible through integrated pest management, a combination of cultural and biological techniques and selective chemical methods. Pesticides may be used on University land sites and buildings by employees of the University or contractors to the University provided procedures for safety, environmental protection and information are followed. All relevant federal Ministry of Agriculture and provincial Ministry of Environment regulations are followed.

PROCEDURE SUMMARY:

The responsibility for the use of pesticides on land sites and buildings under the direct control of the University rests with Administrative Heads of Units and the use is reviewed by the Chemical Safety

Committee under the authority of the President.

Users of pesticides are required to comply with Provincial and Federal regulations. Research use of pesticides is not exempt from these regulations.

Integrated Pest Management (IPM) should be implemented whenever possible. IPM is defined as knowledge of pests and their life cycle to aid in their management through the combination of the use of cultural and biological techniques and selective chemical methods. This strategy will minimize pesticide use. ~~Until IPM is taught as part of the provincial certification program, the University will offer courses on IPM to applicators arranged through the Department of Health, Safety and Environment.~~

As required under the B.C. Pesticide Control Act Regulations, persons using pesticides on UBC lands are required to have, or be under continuous audio or visual contact with a person with, a valid Pesticide Applicator's Certificate.

The Pest Control Products Act (PCP Act) Registration Number must be shown on the label of a pesticide and is proof that

the product has been registered for use by Agriculture Canada.

Supervisors for service licenses are responsible for reporting to the ~~Chemical Safety Committee and the~~ B.C. Ministry of Environment an annual summary of pesticide use and an annual inventory of pesticides; copies of these standard forms are sent to the University Chemical Safety Committee by April 30th of each year.

Each department maintains a pest control service operations record that provincial and UBC regulations require and includes (if applicable): location of application, pest controlled, pest monitoring, product or treatment used, active ingredient(s), PCP registration number, application rate, size of area treated, protective equipment used and weather conditions. pest control evaluation and description of any environmentally sensitive areas.

Storage of pesticides conforms to provincial Ministry of Environment regulations which includes security of premises, protection of materials from the environment, proper labeling of material, suitable containers for the material and in-

ventory requirements.

Disposal of pesticides and their emptied containers follows provincial Ministry of Environment regulations.

Warning signs for storage and sprayed areas conform to standards set out by provincial Ministry of Environment regulations.

DETAILED PROCEDURES:

For more information about integrated pest management methods and chemical pesticides, please consult with the Chemical Safety Officer in the Department of Health, Safety and Environment.

DEFINITIONS:

A Pesticide is a substance or mixture of substances used to control pests.

Pests are living organisms which cause harm to people or their property; they may be plant-parasitic viruses, bacteria, nematodes and fungi as well as certain insects, weeds, rodents, birds and vertebrate predators.

Environmentally sensitive areas are those areas near streams, or where the use of pesticides may be a concern for nearby wildlife, including bees and fish.



THE UNIVERSITY OF BRITISH COLUMBIA

RADIATION SAFETY PROGRAM ANNUAL REPORT 1995
DEPT. OF HEALTH, SAFETY AND ENVIRONMENT

1. Summary and Highlights

The primary objective of the Radiation Safety Program is to ensure the safe and knowledgeable use of radiation sources in research, teaching and the workplace at the University of British Columbia.

At the end of the 1995 calendar year, of the total of 247 licences, 118 were renewed, 51 were amended, 13 lapsed and 10 new licences were issued. The total number of licensed areas, laboratories, decay rooms or storage sites was 649.

In order to monitor external exposure to ionizing radiation, personnel are required to wear thermoluminescent dosimeters which are administered by Health and Welfare Canada. There were no significant exposures to any of the approximately 1500 UBC personnel in 1995. To examine workers for internal contamination of radioactive iodine, 42 thyroid monitoring tests were performed. There were no significant or reportable thyroid exposures detected.

During 1995, four sessions of the course in Radionuclide Safety and Methodology were offered. The total number of faculty, staff and students successfully completing the course was 300. The Radiation Safety Officer also lectured in Pathology 306 and Health Care and Epidemiology 512 on aspects of radiation safety. In addition, there were several one to two hour training sessions given throughout the year to trades personnel and summer students.

The Radiation Safety Program at UBC is staffed by one full time officer and one full time assistant. Both the consolidated and the human research studies licences expired in 1995 and were extended to 1996. A student has been employed on a part-time basis to perform some clerical duties, to increase the time available for the assistant to pursue compliance activities. Officers of the AECB issued four inspection reports for visits to the University research areas in 1995. Significant time and energy was utilized responding to issues raised by these assessments.

The City of Vancouver has relieved the Province of the administration for the campus fire department. This change also affects the Hazardous Materials Response Team. Training of the new team members in radiation emergency response will proceed in 1996.

The University research community continues to expand and utilize radiation sources in diverse and innovative ways. The University is expanding a medical genetics research facility that will house a number of new research faculty and staff.

There were no accidents or incidents that resulted in significant radiation exposures to any personnel.

Access to the electronic mail system and the Internet has allowed for licence holders to send purchase information in standard format to the RSO.

2. UBC Committee on Radioisotopes and Radiation Hazards

- Chairman: Dr. R.T. Morrison
Dept. of Radiology
- Secretary: Dr. W. Greene
Health, Safety and Environment
- Members: Dr. Donald E. Brooks
Dept. of Pathology
Dr. Donald Lyster
Fac. of Pharmaceutical Sciences
Dr. Haydn Pritchard
Dept. of Pathology
Dr. Rosemary Redfield
Dept. of Zoology
Dr. George Spiegelman
Dept. of Microbiology
Dr. David Walker
Dept of Chemistry
- Ex-Officio: Dr. Robert C. Miller
Vice-President, Research
Mr. Lutz Moritz
TRIUMF Safety Group
Mr. Craig M. Smith
Radiation Safety Officer
- Observers: Mr. Richard Cawthorn
Atomic Energy Control Board
Mr. Brian Phillips
Provincial Ministry of Health

The Committee was convened on two occasions in 1995 and the minutes of the meeting were forwarded to the AECB. Dr. R.T. Miller left the University at the end of 1995 and his position of Vice-president Research has been filled by Dr. Bernie Bressler.

3. Radioisotope Use

At the end of the 1995 calendar year, of a total of 247 active licences, 118 were renewed, 51 were amended, 13 lapsed and 10 new licenses were issued. The total number of licensed areas, laboratories, decay rooms or storage sites was 649.

- a. The primary use of the radioactive materials licensed by UBC personnel is research, with the remainder being utilized for teaching. Although the number changes constantly, there are approximately 1500 graduate students, technicians, post-doctoral fellows and faculty actively using radioactive materials.
- b. The details of possession, purchase, gift and acquisition of open source radioisotopes by UBC licensees in 1995 are detailed in Appendix C.
- c. There were no reported or detected sealed source leaks in 1995. The details of sealed source checks, disposals and acquisitions are listed in Appendix D. All sources were wiped and tested. There were no leaks detected.
- d. Although there are many operations which take place off campus (see Appendix E) they receive the same service and/or administrative control as researchers on campus.

In order to strengthen the institutional lines of communication, the UBC Radiation Safety Officer attended Radiation Safety Committee meetings at St. Paul's Hospital.

To ensure that there is an understanding of the responsibilities of the research and hospital institutions, copies of individual licences which include research protocols have been forwarded to the Radiation Safety Officers at St. Paul's Hospital and VGH. These documents are updated as necessary.

- e. During the calendar year 1995, one operation was conducted outside the University campus. It involved subsidiary licence 9-9-4974-95D in which tree swallows were injected with tritium. These experiments were short term and all collected waste and unused isotope was returned to the UBC campus.

4. Contamination and Radiation Surveys

Contamination and radiation surveys are performed routinely at UBC by both research and Radiation Protection personnel. This Office has emphasized daily monitoring and decontamination practices in licensed laboratories.

Depending on the isotope used in a laboratory, wipe tests and monitoring with a Geiger-Mueller probe or with a Low Energy Gamma Scintillator (LEGS) are required for contamination surveys. If the isotope used is a low energy beta emitter, the use of wipe tests and further analysis in a liquid scintillation counter is required. For medium and high energy beta and gamma emissions, a Geiger-Mueller probe is recommended to supplement wipe testing. For low energy gamma rays, such as those from Iodine-125, a LEGS probe is utilized to supplement wipe testing. If contamination is found, decontamination procedures are undertaken in accordance with the UBC Radiation Safety Training Manual which was reprinted in 1995 (copies were enclosed with licence renewal application).

Wipe tests for all isotopes are performed in each laboratory by the Radiation Safety Officer and Assistant during compliance inspections. If positive results are found, the contamination control procedures are reviewed in that laboratory and new protocols are established.

Records of isotope purchase, usage, disposal and contamination control are audited during each inspection as well as during biannual renewal of permits.

5. Incidents

There were no incidents or accidents that resulted in reportable personnel exposure during 1995. There were three minor incidents that involved spilled/contamination.

- 1) April 4, 1995, Room 1347, Biosciences Building.
An old unused survey meter was handled by electronics staff. The meter was contaminated with Na-22. Wipe tests of the instrument showed ~500 DPM of surface contamination. Workers were decontaminated and equipment repair protocols were revised.
- 2) July 12, 1995, Room 200, BRC Building.
Contaminated gloves and paper towels were discovered in the non-radioactive waste stream by a worker. Further investigation showed contamination in various locations in the laboratory. New isotope security and usage protocols were established.
- 3) November 9, 1995, Room 301, Wesbrook Building.
A graduate student was working with small amounts of S-35 and splashed solution on face. Student followed decontamination protocol in manual. The radiation exposure was trivial.

6. Personnel Dosimetry

- a. Thermoluminescent dosimeters.
All UBC personnel, with the few exceptions of those who also work at TRIUMF, are considered Non-Atomic Radiation Workers and hence are limited to an annual dose of 5 mSv. Thermoluminescent dosimeters supplied by the Bureau of Radiation and Medical Devices (Health and Welfare Canada) or Landauer and are used to monitor personnel exposures to ionizing radiation.
No significant exposure to UBC personnel occurred during 1995, and all results were below the annual permissible limits for both body and extremities for members of the general public.

- b. Thyroid monitoring.
In 1995, 42 thyroid scans were performed. The monitoring system that was employed for these tests was calibrated on November 9, 1995 using a neck phantom and radioactive sources supplied by the Health Protection Branch of Health and Welfare Canada.

Regardless of activity utilized, all individuals who radiolabel compounds with free NaI, are required to report for a thyroid scan within three days. Users of iodine labelled compounds utilizing more than 370 kBq are required to report for scans on a quarterly basis. No significant exposure to UBC personnel occurred during 1995, and all results were below the annual permissible limits.

- c. Bioassays.
Bioassays are mandatory at UBC when 1.85 GBq of tritium or 370 MBq of Carbon-14 are used in any thirty day period. No users worked with these amounts of isotope in 1995.

7. Waste Management

The radioactive waste that is produced under the UBC Radiation Safety Program, regardless of the location at which it is generated, is handled in a universal manner. In each case the licensee who generates the waste is fully responsible for ensuring that it is disposed correctly. The UBC Radiation Safety Officer and Assistant do not perform waste handling duties. The activity of isotope disposed and the labelling of the waste materials are controlled by the laboratory personnel. Compliance inspections by the Radiation Safety Officer include a detailed analysis of each licensee's radioactive waste stream.



THE UNIVERSITY OF BRITISH COLUMBIA

RADIATION SAFETY PROGRAM ANNUAL REPORT 1995

a) GASEOUS WASTE

If it is suspected or known that some airborne radioactivity will be released in the course of an experiment, it is required that:

- 1) the procedure be performed in a designated "RADIOACTIVE" fume hood.
- 2) the fume hood is lined with absorbent material capable of containing any spills.
- 3) the radioactivity released to the environment be below the prescribed limits (**0.001 S.G./cubic meter of air**).

The air flow of UBC fume hoods is measured on an annual basis and all standard units are adjusted, repaired or condemned.

b) LIQUID WASTE

- 1) All scintillation cocktails and organic solvents containing less than **0.01 S.G./l** are emptied into approved containers. The empty vials are disposed as low-level solid radioactive waste.
- 2) Aqueous solutions are disposed into the drains with the appropriate dilution of **0.01 S.G./l of water**.

c) SOLID WASTE

The administrative control limit for the disposal of solid radioactive waste at UBC continues to be **0.1 S.G./kg** of waste, which is **one tenth the limit established by the Atomic Energy Control Board**.

- 1) **Hot rad-waste** is held until decayed to the disposal limit, primarily in areas within the laboratories or designated rooms in the various buildings. Material containing isotopes with short half-lives such as Phosphorous-32, Sulphur-35 etc. is held for ten half-lives and then disposed of as low level rad-waste. The Radiation Safety Office also has a storeroom for the decay and storage of radioactive materials. Metal paint cans and sealed five gallon pails are used for this purpose. Arrangements will be made in 1996 to ship high activity-longlived materials to Chalk River Ontario for disposal. No such shipments were conducted in 1995.
- 2) **Low level rad-waste** that emits less than 2.5 $\mu\text{Sv/h}$ or contains less than **0.1 S.G./kg** of waste is considered "low level" waste and is segregated at the source into two categories as follows:
 - i) **Combustible waste** is tagged and sent for incineration at the UBC Environmental Services Facility.
 - ii) **Non-combustible waste** is sent to the Greater Vancouver Regional District Land Fill.

All radioactive contaminated scintillation cocktail is shipped to the United States for disposal. All low level solid rad-waste is incinerated in the UBC facility.

8. Radiation Safety Training

Successful completion of the Radionuclide Safety and Methodology Course remains a mandatory requirement for all students, faculty and staff prior to commencing work with radioactive materials. In 1995, four regular training sessions were offered in the months of January, March, June and September. The course consists of six hours of lectures, a two hour laboratory practical session and a one hour written examination. Any individual who fails to meet the passing grade of 75% is required to resit the exam. The total number of certificates of training issued was 300.

The City of Vancouver has relieved the Province of the administration for the campus fire department. This change also affects the Hazardous Materials Response Team. Training of the new team members in radiation emergency response will proceed in the 1996.

In order to assess the adequacy of emergency response to any emergency, a mock accident was successfully staged. Included in the scenario were the University Endowment Lands Fire Department, Ambulance Services, Radiation Safety Officer, Biosafety Officer, Chemical Safety Officer, and Emergency staff at the University

Hospital. The information gained will be used to enhance the campus wide disaster response plan.

In addition to the regular training classes there were several 1 or 2 hour long non-certification sessions given throughout the year relating to special topics such as waste disposal, radiation protection, individual tutoring on special items or equipment, etcetera.

9. Other Licences

The University operated a research project under licence 9-4974-97D, which permits the use of Tritium at Creston Valley Wildlife Management Area. Although the University has been issued a separate licence for this activity, all such research is conducted under permits issued by the UBC Committee on Radioisotopes and Radiation Hazards. The project is seasonal in nature. The licence was renewed in 1995. There is no isotope on the site.

The University continued work under human-use licence 9-4974-90C. The two research groups in this area are:

Positron Emission Tomography
Dr. Thomas Ruth

Glucose Metabolism and Body Composition
Dr. Graydon Meneilly

Although the University has been issued a human-use licence, all such research is conducted under human-use permits issued by the UBC Committee on Radioisotopes and Radiation Hazards.

10. Outlook

A significant responsibility of the full time assistant is to perform laboratory compliance inspections on a regular basis. There are several research facilities under construction as well as new program initiatives being developed, that upon completion will increase the inspection and service load of the Radiation Safety Office. In an attempt to increase the frequency of compliance inspections to a level that is deemed acceptable to the AECB, a student has been hired on a part time basis to perform some clerical duties. The Program has no formal secretarial support. Demands on the resources of the radiation safety program continue to grow and it does not appear that this growth will abate in 1996. It is hoped that further personnel will be committed to the Radiation Safety Program by the University to meet this expansion; however, given the current fiscal constraints, this is unlikely.

The radioisotope inventory is incorporated into a computerized database system that includes all the pertinent personnel and licence information. Access to the electronic mail system and the Internet has allowed for licence holders to send purchase information in standard format to the RSO. Further, participants may sign up for training courses as well as read current and past issues of the quarterly newsletter 'RADIOACTIVITIES'. These documents provide current information on radiation safety issues as well as course announcements and results of AECB compliance inspections to all licence holders. It is anticipated that future system upgrades will enable researchers to send annual inventory information to facilitate a more timely generation of the annual report.

List of Appendices

The appendices to this report have not been included here. For a complete copy of the UBC Radiation Safety Office's 1995 Annual Report including appendices, please contact the Department of Health, Safety and Environment at 822-2029, or the UBC Radiation Safety Office at 822-7052.

Appendix A: List of Licensees

Appendix B: New and Lapsed Licensees

Appendix C: Summary of Open Sources

Appendix D: Sealed Source Inventory

Appendix E: List of Off Campus Research Protocols and Locations



STUDENT DISCIPLINE REPORT

Under section 58 of the *University Act* the President of the University has authority to impose discipline on students for academic and non-academic offences (see page 65 of the 1996/97 University Calendar). A summary of such disciplinary cases is published on a regular basis, without disclosing the names of students involved.

In the period November 1, 1995 to August 31, 1996, 33 students were disciplined. For each case, the events leading to the imposition of the discipline and the discipline imposed are summarized below. Discipline may vary depending upon all of the circumstances of a particular case.

1. A student was alleged to have committed plagiarism in the preparation of assignments.

Outcome: charge dismissed; allegation not substantiated on consideration of all the evidence.

2. A student misrepresented question-

naires that were administered to students.

Discipline: suspension from the University for 12 months.*

3. A student committed plagiarism in an assignment.

Discipline: in the special circumstances, a mark of zero on the assignment and suspension from the University for 4 months.*

4. A student committed plagiarism/cheated on a term paper.

Discipline: a mark of zero in the course and suspension from the University for 12 months.*

5. A student wrongfully attended a mid-term examination and submitted the work as that of another student.

Discipline: a mark of zero in the course and suspension from the University for 12 months.*

6. A student committed plagiarism in an essay.

Discipline: in the special circumstances, a mark of zero on the essay and a letter of reprimand.

7. A student wrongfully attended and submitted an examination under a false name.

Discipline: a mark of zero in the course and suspension from the University for 12 months.*

8. A student submitted essentially the same paper in two courses without prior approval.

Discipline: in the special circumstances, a mark of zero in the course and a suspension from the University for 4 months.*

9. A student forged the signature of a guarantor on a loan application.

Discipline: a letter of reprimand.* An appeal to the Senate Committee on Student Appeals was dismissed.

10. A student was in possession and used unauthorized materials during an examination.

Discipline: in the special circumstances, a mark of zero in the course and a letter of reprimand.*

11. A student was in possession of unauthorized materials during an examination.

Discipline: a mark of zero in the course and suspension from the University for 12 months.*

12. A student submitted false information on a University Registration/

Change of Registration form.

Discipline: in the special circumstances, a mark of zero in the course and a suspension from the University for 4 months.*

13. A student submitted false information on a University Registration/Change of Registration Form.

Discipline: in the special circumstances, a course grade corresponding to work completed in the course in accordance with University regulations and a letter of reprimand.

14. A student repeatedly failed to respond to notices of a hearing to deal with allegations of submitting false information on a University Registration/Change of Registration Form.

Discipline: registration permanently blocked until appearance before the Disciplinary Committee and note on transcript to this effect.

15. A student submitted false information on a University Registration/Change of Registration Form.

Discipline: in the special circumstances, a mark of zero in the course corresponding to work completed in accordance to University regulations and a letter of reprimand.



STUDENT DISCIPLINE REPORT (cont.)

16. A student failed to disclose on a University application form prior attendance at the University and also misstated other relevant information.
Discipline: in the special circumstances, a letter of reprimand.*
17. A student failed to disclose on a University application prior attendance at another University.
Discipline: in the special circumstances, suspension from the University for 4 months.*
18. A student included unacceptable comments on a final examination.
Discipline: a letter of reprimand.
19. A student alleged to have committed plagiarism/cheated in the preparation of an assignment.
Outcome: charge dismissed; allegation not substantiated on consideration of all the evidence.
20. A student submitted false information on a University Registration Form.
Discipline: a course grade corresponding in the course in accordance with University regulations and a letter of reprimand.
21. A student repeatedly failed to appear at scheduled hearings to deal with an allegation of submitting false information on a University Registration/Change of Registration form.
Discipline: registration permanently blocked until appearance before the Disciplinary Committee and a note on transcript to this effect.
22. A student altered a returned examination paper by replacing portions of it with another student's work and attempted to secure a revised grade in the course.
Discipline: a mark of zero in the course and a suspension from the University for 20 months.*
23. A student had and used unauthorized material in an examination.
Discipline: in the special circumstances, a letter of reprimand.
24. A student permitted another student to copy portions of his term paper.
Discipline: in the special circumstances, a letter of severe reprimand.*
25. A student plagiarized in the preparation of a paper.
Discipline: a mark of zero for the course and a suspension from the University for a period of 12 months.*
26. A student failed to disclose on a University application form prior attendance at other post secondary institutions, including one from which there was a requirement to withdraw.
Discipline: in the special circumstances, a suspension from the University for a period of 4 months.*
27. A student plagiarized in the preparation of a paper.
Discipline: in the special circumstances, a mark of zero on the paper and a letter of reprimand.*
28. A student altered a returned midterm examination in an attempt to secure a revised grade.
Discipline: a mark of zero in the course and a suspension from the University for 12 months.*
29. A student plagiarized in the preparation of an essay.
Discipline: in the special circumstances, a letter of caution.
30. A student plagiarized/cheated in the preparation of an essay.
Discipline: in the special circumstances, a mark of zero in the course and a suspension from the University for 8 months.*
31. A student participated in a cheating incident in an examination.
Discipline: in the special circumstances, a mark of zero in the course and a suspension from the University for 4 months.* An appeal to the Senate Committee on University Appeals on Academic Discipline was allowed in part.
32. A student was alleged to have cheated in the preparation of an assignment.
Outcome: charge dismissed; allegation not substantiated on a consideration of all the evidence.
33. A student brought unauthorized material into a final examination.
Discipline: a mark of zero on the course and suspension from the University for 4 months.*

* In all cases indicated by an asterisk a notation of disciplinary action is entered on the student's transcript and in the student's file. At any time after two years have elapsed from the date of his or her graduation the student may apply to the President to exercise his discretion to remove the notation.

Students under disciplinary suspension from UBC may not take courses at other institutions for transfer of credit back to UBC.

Exchange programs big for business schools

by Stephen Forgacs

Staff writer

When Kim Paterson graduated with a Master of Business Administration degree from UBC earlier this year, she joined the ranks of a growing number of students leaving university with at least a little international experience under their belts.

In 1995, while enrolled in the MBA program, Paterson spent four months studying international management at the Copenhagen Business School.

"The time I spent in Copenhagen, where I studied with students from all over the world, gave me a new perspective on how business practices can be influenced by different cultures," says Paterson, who is now responsible for study abroad and exchange programs in UBC's Faculty of Commerce and Business Administration.

The importance of experiences like Paterson's, and other issues surrounding international educational exchange programs, are the focus of the Program of International Management (PIM) Conference taking place in Vancouver Nov. 7 - 9 at the Hotel Vancouver.

More than 100 deans and administrators from business schools in Asia, Europe and North and South America will attend the conference, held in Canada for the second time since three European business schools formed the program in 1973. McGill University hosted the conference in the 1970s.

"The nature of business is becoming increasingly global in scope. Companies that once relied on one or two major markets, usually close to home, are looking further afield for new markets and opportunities," says Ethel Davis, assistant dean and director of UBC's MBA program.

"Businesses are going global in order to survive economically, and we feel it is very important that our students have the skills and knowledge that will allow them to work effectively in the global arena."

The Vancouver conference, which has adopted the theme "Going Global," is the 23rd annual meeting of PIM members, a group which has grown rapidly since it was founded. UBC joined the conference as a member in 1992.

Commerce Dean Michael Goldberg

says the fact that the conference is being held in Vancouver this year indicates the growing interest of member schools in reaching out to the Asia Pacific region. The first Asian member, the Asian Institute of Management in Manila, will be inducted at this year's conference.

Membership is one of the issues on the agenda for the conference, says Davis. As demand for exchange programs grows, more and more business schools are seeking to form partnerships. But to ensure exchanges meet the requirements of the various business programs in which exchange students are enrolled, membership has to be carefully controlled, Davis says. All PIM members are required to undertake exchanges with at least 20 per cent of the member schools and exchange agreements are aimed at providing students with an experience that is as beneficial as possible.

"We are very selective as to whom we exchange with," Davis says. "We see an educational exchange as having two functions: it's an academic experience as well as a cultural experience. For that reason we will not normally exchange within North America."

Among North American members are the University of California at Berkeley and Los Angeles, New York University, University of North Carolina, Duke University, University of Michigan, University of Western Ontario, and McGill University.

UBC's Faculty of Commerce undertakes exchanges with schools in Asia, South America, and Europe. It has 28 exchange agreements at the MBA level and 24 at the undergraduate with some overlap. While exchanges at the graduate level remains relatively constant at 30 per cent of students per year, Davis says the real growth in demand for exchanges is occurring at the undergraduate level as younger students become aware of the advantages offered by international experience.

Keynote speakers at two of the conference events represent the conference's major sponsors. Michael Tretheway, on leave from the Faculty of Commerce and Business Administration, has been working as a special advisor to the president of the Vancouver Airport Authority, and Martin Glynn is executive vice-president of the Hongkong Bank of Canada.



Stephen Forgacs photo

Apple Of Their Eye

Katherine Frein eyes one of the larger apples found at the UBC Botanical Garden's Apple Festival. Katherine and her parents Nicole and Mark Frein joined 5,000 other people at the event. More than 50 varieties of apples were available to taste and the garden sold close to 5,000 kilograms of apples. The festival was one of several events that took place recently as UBC celebrated Homecoming.



United Way

United by Giving

Please give generously.

News Digest

For the fifth consecutive year, UBC students will be trick or treating at Halloween for non-perishable food items to be donated to local food banks.

Students are asked to meet today in Room 205 of the Student Union Building between 4:30 and 5:30 p.m. to be organized into teams and assigned an area. Canvassing will take place in Point Grey and Kitsilano neighbourhoods until 9 p.m.

Last year, student volunteers collected 2,700 kilograms of food. For more information, call 221-9888.

•••••

The Alma Mater Society (AMS) is seeking proposals for visible, innovative projects that will directly benefit UBC students.

A total of \$150,000 is available through the AMS Innovative Projects Fund for the 1996/97 academic year. Support for each project will be limited to \$35,000 annually.

Applications are available in Room 238 in the Student Union Building and Room 123 in the Old Administration Building. Deadline for applications is Nov. 15.

For more information, call 822-3972, fax 822-9019 or e-mail president@ams.ubc.ca

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Parking and Security Services has changed its name to reflect its participation in helping to promote the use of alternative forms of transportation.

Now called Parking and Transportation, the office has established a committee to consider transportation issues, an important part of the university's Official Community Plan.

Responsibility for providing campus security services remains with the office.

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Faculty and staff are invited to drop by Student Health Services on Tuesday, Nov. 5, between 8 a.m. and 1 p.m., and Thursday, Nov. 14, noon to 3:30 p.m. to receive a flu vaccination.

"Influenza is a debilitating disease and everyone should consider being vaccinated," said Dr. John Allingham of Student Health Services. "High risk groups include the elderly over age 65 and people suffering from respiratory and heart diseases."

December to March are peak months for flu. Nurses at Student Health Services, located on the main floor of the Vancouver Hospital and Health Sciences Centre, UBC Pavilion, will be on hand to administer the shots. A \$10 fee will be applied to cover the cost of the vaccine. For more information, call 822-7011.

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UBC and one of its spin-off companies, QLT PhotoTherapeutics Inc., have won a national award for research and development collaboration.

University and company representatives received their University-Industry Synergy Partnership Award earlier this month in Montreal at a symposium sponsored by the Natural Sciences and Engineering Research Council (NSERC) and the Conference Board of Canada.

The awards—given this year to seven universities, 13 companies and a university-industry consortium—recognize excellence in university research, superior management skills, innovation, creativity and entrepreneurship.

QLT PhotoTherapeutics, co-founded by UBC microbiologist Julia Levy, specializes in the development of light-activated drugs to treat cancer and age-related vision loss.

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Classified

The classified advertising rate is \$15.75 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 November 14, 1996 issue of UBC Reports is noon, November 4.

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.

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TORONTO APT. Jan. 1 - June 1, 1997. Very near Robarts library, U of T campus. One BR, study, \$900/mo. Call (604)224-7484 or 822-5509 (Vancouver) or (416) 922-9834 (Toronto).

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House Sitters

U OF ALBERTA PROFESSOR/ SPOUSE on study leave at UBC January 1 to June 30 require accommodation. Interest in house sitting or maybe house trade. Call 1-403-452-8251 (home) or 492-0838 (office).

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.

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Events

SINGLES IN SCIENCE. Single people interested in science or nature are meeting through a nationwide network. Contact us for info: Science Connection, P.O. Box 389, Port Dover, ON N0A 1N0; e-mail 71554.2160@compuserve.com; 1-800-667-5179.

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The Faculty of Medicine, University of British Columbia invites applications and nominations for the position of Head of the Department of Psychiatry.

We seek an academic leader who will vigorously direct and develop the teaching and research programs of the department which functions in seven teaching hospitals. The department has 24 full-time and 165 clinical/part-time faculty members and currently attracts external research support of over \$2.8 million annually. Candidates should hold specialty qualification in Psychiatry and have a proven record of scholarly excellence, broad clinical experience and a commitment to undergraduate and graduate medical education. Anticipated start date will be July 1, 1997. The successful candidate will also be appointed at the rank of Professor. Salary will be commensurate with experience and qualifications. This appointment is subject to final budgetary approval.

Applications, accompanied by a detailed curriculum vitae and the names of three references, should be directed by December 31, 1996 to:

Dr. John Cairns
 Dean, Faculty of Medicine
 Room 317, Instructional Resources Centre
 University of British Columbia
 2194 Health Sciences Mall
 Vancouver, B.C.
 V6T 1Z3

The University of British Columbia welcomes all qualified applicants, especially women, aboriginal people, visible minorities and persons with disabilities. In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada.



Stephen Forgacs photo

Pioneer Pride

UBC alumni from the university's earliest years gathered at Cecil Green Park House during Homecoming to celebrate the 100th birthday of Evelyn Lett (seated at right) at the Great Trek Remembered Luncheon. Lett, who graduated from UBC with a BA in 1917, an MA in 1925 and who received an honorary degree from UBC in 1958, has been active at UBC since its founding.

Sports to watch Nov. 1-16

On-campus sports action continues with a two-game series Nov. 1-2 when the **Thunderbird hockey** team takes on the Calgary Dinosaurs at the Thunderbird Winter Sports Centre. Games start at 7:30 p.m. **Volleyball** fans can experience several days of action as the Rucanor Thunderball tournament comes to UBC. UBC men will meet teams

including the 16-time-champion UCLA Bruins between Thursday, Oct. 31 and Saturday, Nov. 2. Games run all day in the War Memorial Gym. Two weeks later, the men's and women's teams take on Calgary in two games each. The men play Friday, Nov. 15 at 8 p.m. and Saturday, Nov. 16 at 6:15 p.m., while the women play Nov. 15 at 6:15 p.m. and

Nov. 16 at 8 p.m. The games are in War Memorial Gym. The Thunderbird men's soccer team, ranked first in Canada, takes on the second-ranked team from the University of Victoria in the Canada West Championships Saturday, Nov. 2 at 2 p.m. on the O.J. Todd Field.

For up-to-the-hour scores and event information call 822-BIRD.



Campus works

MVS Migration Project

Placing information control in staff hands

by Stephen Forgacs

Staff writer

UBC is replacing its major administrative computer applications to provide administrators and staff with greater authority and responsibility for the information required to manage their activities.

The result of the MVS Migration Project will be an integrated set of administrative applications, said UBC Director of Budget and Planning, John Chase, who is also co-chair of the project steering committee.

"The redesign of these systems is intended to address the concerns of the customers of the systems, and that means improved management information," Chase said.

Getting applications that were originally designed to meet the need of a central department and not the administrators and staff who use them fall short of current requirements. And the systems don't relate well, if at all, to one another, said Chase.

"The level of integration in the existing systems is very low," Chase said. "Simply put, the systems were designed in a different era to meet a different need. We also recognize the need to move to a new technical environment because there are alternative systems out there that are cheaper and more cost-effective than those we are currently using."

The four separate but inter-related application systems include the Student Information System; Human Resources and Payroll; Finance, including Purchasing and Budgeting; and Alumni/Development.

Under the present operating systems, much of the data collected by individual departments is manually processed through a number of approval stages before being entered in the appropriate database. In many cases reports required by an administrator or staff member must be generated by a central department. This situation causes time delays at both the data entry and retrieval levels. Once the new systems are operational, administrators and staff will have more control of and responsibility for the data that is entered and the ability to generate reports tailored to their own unique requirements.

Chase said the transition will require institution-wide examination of work flow which will result in enhanced timeliness and accuracy of the data being entered.

The transition to the new system is being undertaken by UBC in partnership with Team Sierra—a consortium of the Sierra Systems Inc., hardware vendor Data General Inc., and two application software vendors, PeopleSoft and Viking Systems. Migration to UNIX-based application for all of the hardware is targeted for completion by the end of 1997. Installation and development of new application software has begun and will continue throughout the life of the project. Costs of the transition are being funded largely from savings generated by redevelopment of the administration applications and migration to a new technology platform.

People

by staff writers

Clark Binkley has accepted an appointment to a second term as dean of the Faculty of Forestry. A former professor of Forest Resource Management at Yale University, Binkley has served as dean of Forestry at UBC since September 1990. His first term ended in June.

The faculty has undergone significant changes under Binkley's supervision including the introduction of new initiatives such as the Wood Products Processing Program, the Natural Resources Conservation Program, the Centre for Applied Conservation Biology and the construction of a new Forest Sciences Centre. Since Binkley was appointed in 1990,

undergraduate enrolment has more than doubled from 265 in 1990/91 to 598 this year, while graduate enrolment during the same period has increased from 119 to 204 students. Extramural research funding to the faculty has also increased significantly during the dean's first term.

Binkley, a graduate of Yale, received his PhD in Forestry and Environmental Studies in 1979. He studied applied mathematics during his undergraduate years at Harvard and received a Master of Science degree in engineering from Harvard in 1976.



Binkley

School of Library, Archival and Information Studies student **Shauna McRanor** is the recipient of the 1996 Theodore Calvin Pease Award which recognizes superior writing achievements by students of archival administration or who are involved in archival internship programs.

The award, sponsored by the Society of American Archivists (SAA), was presented to McRanor for an essay entitled, *A Critical Analysis of Intrinsic Value*, cited by the society as a "well reasoned and provocative paper which challenges many familiar assumptions about intrinsic value and the role that it should play in archival appraisal."

She was honoured during the society's recent annual meeting in San Diego. McRanor's paper will appear in a future issue of the SAA's journal, *American Archivist*.

Susan Kennedy, director of UBC's Occupational Hygiene Program, is the new president of the Academic Women's Association (AWA) for 1996/97.

She replaces Dianne Newell, a professor of history, who was recently appointed as associate dean in the Faculty of Graduate Studies. Newell will continue as an officer of the AWA.

Kennedy also serves as an associate professor in the Dept. of Health Care and Epidemiology and is an associate member of the Respiratory Division of the Dept. of Medicine.

The Academic Women's Association was founded in 1976 to develop a community of women academics at UBC and provide advocacy for their concerns at the university.

Obituaries

The Dept. of Mathematics is mourning the loss of two faculty members—Prof. **Roy Rene Douglas**, who died of cancer Sept. 22, and Assoc. Prof. **Lawrence G. Roberts**, who died unexpectedly on his 54th birthday Sept. 28.—and former faculty member Prof. Emeritus **David C. Murdoch**, who died Aug. 18.

Douglas's research included such diverse areas as algebraic topology, multivariate data analysis, quantum mechanics and molecular spectroscopy.

A faculty member at UBC since 1965, Douglas also worked as a consultant with University Hill Secondary School to prepare gifted young students for early entry to university.

He is survived by his wife, a son and two daughters.

Winner of the Science Undergraduate Teaching Award in 1988, Roberts earned his undergraduate degree at UBC in 1964, returning to teach on campus in 1968 after earning his PhD at Harvard University. His early work with Barry Mazur at Harvard was an element in what is considered one of the most important mathematical breakthroughs of the century, Andrew Wiles's celebrated proof of Fermat's Last Theorem.

He is survived by his wife and mother.

Murdoch, who earned his MA at UBC and PhD at the University of Toronto, spent all but six of his years as an academic at UBC.

His contributions in mathematics were in the areas of ring theory, quasi-groups and ideal theory. His two books, *Linear Algebra for Undergraduates*, and *Introduction to Vectors and Matrices*, have been used in universities across North America.

He is survived by his wife and three daughters.

Profile

Propping Up The Stage

Sherry Milne turns other people's cast-offs into the stuff of theatre



Stephen Forgacs photo

Stashed away in cupboards, stairwells—even washrooms—the umbrellas, chickens, brooms and other items that help make Frederic Wood Theatre productions come to life have been Sherry Milne's responsibility since 1965.

by Connie Bagshaw

Staff writer

Looking for the goose that laid the golden egg? Ask Sherry Milne.

As head of props at the Frederic Wood Theatre, Milne knows where to find the goose and thousands of other items she's made or acquired for student productions over the past 28 years.

Hatpins to hobby horses are squirreled away wherever Milne can find room on campus — in cupboards, basements and warehouses — even in the men's washroom in the theatre's main lobby area.

"Students don't have budgets, that's why I have to keep stock for two or three years before I can remove or replace it," she says. "They are always so grateful for the very satisfying, beautiful sets we are able to produce with little money."

Milne approaches her job with the same thriftiness of a parent shopping for a large brood, scouring garage sales, antique stores and thrift shops to build inventory which she supplements by trading props with local theatres and borrowing items from her mother and grandmother, as well as from her own home.

Her frugality is legend in the department, and a source of amusement among her colleagues.

Adorning Milne's office is an ad for men's underwear, clipped from a magazine several years ago, that reads: "What will your underwear be doing a year from now?"

Someone has written on the ad in response: "We know where ours will be."

Asked to elaborate, Milne doesn't skip a beat, describing the durability of briefs and their longevity as a tool for cleaning paint brushes.

Despite the need to economize, Milne

is not a pack rat, and she no longer accepts every soiled sofa or set of chipped china donated to the theatre.

"In the beginning, we took everything but we've had to become more selective over the years because of shrinking storage space. I don't keep a prop unless it's going to be useful."

A graduate of UBC's theatre program, Milne was hired on contract in 1965, spending the first three years working in wardrobe and doing wigs and makeup. Her introduction to props came during preparations for *Purple Dust* by Irish playwright Sean O'Casey.

"We realized early one morning that we needed a cow. It was 2 a.m., we didn't have a designer and, although I didn't have a clue what to do, I started making my very first cow. It turned out fine."

That was the beginning of a new career for Milne who transformed the role of props — which had originally been done by the ladies auxiliary to the theatre — from an afterthought to an integral part of Frederic Wood Theatre productions.

A gifted seamstress and color technician, Milne developed her expertise in props on the job after the departure of her predecessor. Single-handedly, she established the props department, and was its sole staff member until four years ago.

She also received training at the Stratford Festival, one of 10 people selected from across Canada for the prestigious company's intern program.

In addition to theatre experience, Milne also works in film and teaches props and design to high school students and various theatre groups.

For the Walt Disney film *White Fang 2*, Milne and her assistants were assigned the task of creating a native village.

"We were told to build some things, so we started creating — masks, rattles, bowls, baskets and many, many fish, all based on Haida designs. It's not unusual to be told: 'Show me something I'll like' or 'I'll know what I want when I see it.' It's a wonderfully frantic process."

With no formal props course on campus, UBC theatre students often find themselves receiving the same type of on-the-job experience. Training, as a result, has fallen to Milne.

"Students are always dropping by to ask questions and get advice," she says. "When a production is their thesis, they want to be involved and as knowledgeable as possible about every aspect."

Milne, who has seen many changes in the field over the past three decades, is finding herself a perpetual student.

She recently completed a special course in gun handling and storage which she was required to take because of new firearms legislation.

"I can't remember the number of times I carried guns to and from the theatre over the years without thinking twice about it, and without any permits."

Milne doesn't bemoan the detail and organization involved in her work — it's what she says she adores most about it.

One of the greatest challenges of her career was to serve a full banquet for a Hungarian peasant wedding scene every night during the 11-day run of Julius Hay's *To Have*, which launched last year's season at the Frederic Wood Theatre.

Milne collaborated with the UBC Food Group which prepared real food to augment her rubber chickens and roasts.

"I quickly learned which cast members had food allergies, who was diabetic and

which aromas wafted into the audience."

After almost 30 years of reading scripts and pulling props lists, Milne feels ready for a change. Although she talks about retirement, she's taking courses in family counselling.

"I've absolutely loved what I've been doing; I couldn't do it otherwise. But it's time to explore something completely different."

Milne considers a career in family counselling the next logical step for someone with her background.

"I've always been curious about how things work which is a necessary attribute for a prop builder," she explains. "That interest includes how people work, how they interact and influence each other's behavior."

As part of her studies at the Pacific Coast Family Therapy Training Association, Milne has been working with cancer patients and survivors on issues concerning their illness and family relationships.

"I'm focusing on family therapy because families are often our greatest source of pain and our greatest source of strength and inspiration."

For now, however, Milne will continue dressing the five productions on the theatre's main stage, and four shows in the Dorothy Somerset Studio that are produced each year.

Having just completed Sam Shepard's *A Lie of the Mind*, she is preparing the stage for the Nov. 13 opening of *Hansel and Gretel* and looking ahead to Morris Panych's *7 Stories* coming in January.

When it's suggested that her own home must be an interesting reflection of her skills, Milne confesses that she doesn't have time to decorate.