

UBC REPORTS

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BY UNIVERSITIES COUNCIL

UBC 'shortchanged'; rationale sought for grant allocations

Robert H.T. Smith, UBC president *pro tem.*, today criticized the distribution of university adjustment funds by the Universities Council of B.C. to the province's three universities. "If the Council carries out the allocations it has announced, the effect will seriously prejudice the future of UBC, the

province's flagship university", said Dr. Smith.

Dr. Smith's charge that the University of B.C. has been "shortchanged" applies to the division of a special adjustment fund of \$14,924,900 announced in last month's provincial budget. The figure represents five

per cent of the total amount of money devoted in the budget to the University of B.C., Simon Fraser University and the University of Victoria.

The Council has announced plans to divide \$11 million of the fund among the three universities. \$10 million of the fund is to help the universities reduce their operations. However, UBC will only receive 55 per cent or \$5.5 million of this amount.

Dr. Smith said the figure of 55 per cent is in conflict with the 60 per cent proportion used by the Council in allocating UBC its share of \$271,645,850 earmarked in the budget speech for the "University Operating Contributions Program" for the three universities. Last year, the Council also allotted UBC 60 per cent of the continuing operating grant made to the three universities.

The Council also plans to allocate \$1 million of the adjustment fund to the three universities for "university research activities of proven high quality." UBC will receive only 75 per cent of this amount.

Dr. Smith said that the 75 per cent allocation to UBC makes little sense since UBC, as the major research university in the province, does 80 per cent of all research that is funded by external research agencies at the three universities.

Dr. Smith said he has asked that the Council provide the rationale for allocating the funds.

"The Council, like the universities, must be accountable if it is to function with any credibility," he said.

Dr. Smith also said the Council plans to hold \$3,424,900 of the \$14.9 million fund for contingencies, including possible assistance to the provincial government in meeting its commitment to the universities in expanding engineering education.

"The provincial government originally undertook to expand engineering education at the three universities as a special program outside of normal funding for the universities," he said.

"The three universities received assurances that normal funding of university operations would not be compromised. It appears that the government may now pay for its engineering program expansion by taking the money out of funds that would normally go to the universities."

The Council also plans to hold back \$500,000 to support plans submitted by "two or more institutions," in the Council's words.

Excluding the \$500,000 and \$3,424,900 which have yet to be allocated, UBC will receive \$169,343,046 from the Council, 98.64 per cent of the University's operating grant in 1984-85.

SFU will receive \$62,724,525 or 99.19 per cent and UVic \$50,578,279 or 99.11 per cent of their 1984-85 operating grants.



Bill Nieuwenhuizen of the Department of Physical Plant is no space man. He's required to wear special protective equipment because he's exposed all day to an approved but selective herbicide called Casoron, which is highly effective in keeping down unwanted weeds and seedlings in UBC flower and shrub beds. The only disadvantage to the outfit, he says, is that the plastic visor of his helmet sometimes fogs up.



The dust is flying on the east side of the campus on Fairview Crescent just off Wesbrook Mall as workmen press on with construction of 187 townhouse units which will eventually house almost 800 UBC students. When development is completed later this year it will be leased for one year by the Expo 86 Corporation to house individuals coming to Vancouver staff international pavilions at the 1986 world exposition. Total cost of the new housing development will be about \$14.3 million.

\$31 million biomedical research centre planned

UBC has attracted another "satellite" research enterprise, a \$31-million biomedical research centre.

The centre will develop anti-viral and anti-cancer drugs such as interferon and carry out clinical trials of the drugs on patients in the Health Sciences Centre Hospital on campus and eventually with other teaching hospitals affiliated with the University.

The work will be done in close association with the B.C. Cancer Control Agency.

Dr. Peter Larkin, UBC's associate vice-president for research, said the centre is locating at UBC because of the University's recognized talents in biotechnology, a field that includes what is colloquially known as gene

splicing and genetic engineering.

"UBC professors doing research in this area are found in a number of faculties across the campus. We are known as a leading centre in Canada," Dr. Larkin said.

"In biology, human cells are routinely grown in test tubes in a liquid called a medium that supplies all of the necessary nutrients for growth. The centre is locating in a medium of University talent, rich in knowledge and expertise.

"One way of putting our biotechnology research into perspective is to consider the number of contracts we have under the federal National Research Council's

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Senate adds to 'no-no' list for UBC exams

UBC's Senate approved changes in rules governing formal University examinations at its April meeting.

In future, students will be prohibited from making use of calculators, computers, audio or video cassette players or other memory aid devices, other than as authorized by the examiners.

The existing regulations prohibit the use of books, papers and memoranda. The full text of "Rules governing formal examinations," appears on page 18 of the 1985-86 UBC Calendar, which went to press before the amendments approved by Senate last week could be incorporated into the wording.

Coordinator will oversee international activities

UBC's Board of Governors has approved the appointment of a coordinator of international activities, who will report to Dr. Peter Larkin, the associate vice-president for research in the President's Office.

He is Prof. John Andrews, dean of the Faculty of Education from 1973 to



Prof. John Andrews

1979, when he stepped down to become a full professor in that faculty's Department of Administrative, Adult and Higher Education.

Prof. Andrews, whose appointment as coordinator of international activities was effective on April 1, will continue to teach in education, where he specializes in organizational theory and its application to higher education.

One of Prof. Andrew's duties will be to administer some 50 to 60 student and faculty exchange agreements with universities in foreign countries.

These agreements, Prof. Andrews said, "are basically statements of good intentions which don't obligate the parties to do anything. What they do is provide a mechanism to enable students or faculty members to use the facilities of the foreign university for teaching and research when the opportunity arises."

Prof. Andrews said he's in the process of learning what's involved in his new post, "but my impression is that most of the work centres on making arrangements for visiting scholars to spend varying amounts of time — from a week up to a year — on the UBC campus.

"The work of most visitors is fairly focussed," Prof. Andrews said, "which means they want to know more about a specific area of academic work. This means that a specific arrangement has to be made for each visitor in terms of contact with UBC scholars, office space, access to classes, etc."

Another important aspect of Prof. Andrew's work will be providing information on opportunities for faculty members and students who wish to engage in international activities, a function that Prof. Andrews says he interprets "in the broadest sense."

Prof. Andrews also regards as important the task of providing information on UBC international activities to national and international agencies. At the moment, he's in touch with the International Development Office of the Association of Universities and Colleges of Canada in connection with a project designed to upgrade and strengthen provincial universities in China.

The World Bank will provide more than \$200 million for the project, which will be administered through the

IDO in Ottawa. Prof. Andrews expects UBC faculty members will make a contribution to the project.

Among other things, Prof. Andrews will also prepare and update a directory of current UBC international activities, chair the President's Committee on International Activities, and make arrangements, in collaboration with the director of ceremonies, for official foreign delegations that come to UBC.

Although he says he's not an expert in international education, Prof. Andrew has been a member of the board of directors of the Canadian Bureau of International Education and has both run a number of overseas projects and planned tailor-made programs for visitors.

At the moment he's involved in a World Bank project aimed at improving the managerial skills of top-level administrators in the educational system of Indonesia.

9 departments get new heads

UBC's Board of Governors has approved the appointments of nine new department heads in the Faculties of Arts, Science and Applied Science.

Faculty of Arts appointments are:

- Daniel J. Overmyer, a UBC faculty member since 1973 and an expert on Chinese religions, as head of the Department of Asian Studies;
- Klaus Petersen, who joined the UBC faculty in 1970 and specializes in modern German literature, as head of the Department of Germanic Studies;
- Richard W. Unger, a medieval history and economics expert who was appointed to the UBC faculty in 1969, as head of the Department of History;
- David J. Elkins, who joined the UBC faculty in 1969 and specializes in Canadian provincial politics, as head of the Department of Political Science;
- Samuel Ho, an expert on the economics of China, Japan and Taiwan and a faculty member since 1970, as head of the Department of Economics, and

- David Ingram, who joined the UBC faculty in 1972 and specializes in child language acquisition and American Indian languages, as head of the Department of Linguistics.

All the arts appointments are effective on July 1, except those for Drs. Overmyer and Unger, who will not take up their posts until July 1, 1986, and that of Dr. Elkins, who is currently on leave and who take up his new post on Sept. 1 this year.

Faculty of Science appointments are:

- Anthony D.M. Glass, who joined the UBC faculty in 1976 and whose research interests are in the area of computer-controlled hydroponic growth facilities, the regulation of ion absorption in higher plants and the mechanisms underlying chemical interactions between plants, as head of the Department of Botany; and
- Anthony J. Sinclair, whose research interests are in the area of mineral deposits and exploration and data analysis and who has been at UBC since 1964, as head of the Department of Geological Sciences.

Both Faculty of Science appointments were effective on April 1.

In the Faculty of Applied Science, J.S. Nadeau, who joined UBC in 1970 and who specializes in the study of ceramics and composite materials such as reinforced plastics, will become head of the Department of Metallurgical Engineering on July 1.



These four members of UBC's Department of Food Services will be on hand Sunday (May 5) to welcome you to Cecil Green Park, where Sunday-afternoon teas will be served throughout the summer from 1 to 5 p.m. The teas feature English scones, tea sandwiches, cream and preserves, fresh fruit and pastries as well as a selection of specialty teas and coffee. The following day, May 6, the Longhouse restaurant will begin summertime operations in the SUBWay Cafeteria from 2:30 to 8 p.m. to coincide with the start of UBC's 1985 conference season.

RESEARCH CENTRE Continued from Page 1

program for industry laboratory projects. The scheme is specifically designed to stimulate the transfer of biotechnology from university campuses into the marketplace. UBC has almost as many contracts under the program as the University of Toronto and McGill University combined."

UBC does about \$10 million of biotechnology research each year.

Although UBC faculty do research of all types worth about \$60 million a year, a variety of other "satellite" organizations on the campus account for approximately the same amount of research, effectively doubling the value of research done on the campus.

Other such organizations include Agriculture Canada, Forintek, Fisheries and Oceans Canada, B.C. Research, the Pulp and Paper Research Institute of Canada (PAPRICAN) now under construction, and the TRIUMF cyclotron project, the largest single research group on campus.

Partners in financing the new centre are the Terry Fox Medical Research Foundation and the Wellcome Foundation, a major pharmaceutical firm in the U.K.

The Fox Foundation was initially funded by the provincial government through a gift of 4,655,045 shares in B.C. Resources Investment Corp. (BRIC).

The centre is a further development of an earlier agreement between the two foundations which gave the Fox Foundation rights to Wellcome's interferon, known by its trade name

Wellferon.

The centre will consist of a pilot fermentation facility to be built on Discovery Parks' UBC site south of 16th Avenue and east of Westbrook Mall, and a laboratory research facility to be built on the UBC campus.

Funding for the fermentation facility will be assisted by an interest-subsidized loan of \$8 million from the B.C. Government Corp. Additional funding is expected from the federal government.

The Fox Foundation will build the research laboratory. Until it is built, UBC will provide laboratory space. Construction is scheduled to begin at the end of the year.

Guiding the centre will be a 15-member board of directors representing UBC, the two foundations, the Health Sciences Centre Hospital, B.C. Cancer Control Agency and the Ministry of Health.

Man-in-Motion Tour

Update: May 1, 1985. Rick Hansen has travelled 1,693 miles on his round-the-world wheelchair tour to raise funds for spinal cord research and rehabilitation, and is currently in Quartzite, Arizona. Contributions in B.C. so far total \$183,420. If you'd like to make a donation, call 687-5200.

Austrians honor UBC ecologist

Canada is considering a research project to ensure that long-term economic prosperity is not compromised by inadvertent mismanagement of our natural resources.

The project is being planned by a steering committee chaired by Dr. Art Collin, secretary to the Minister of State for Science and Technology. Other members of the committee include senior administrators — mostly at the senior deputy minister level — from Agriculture Canada, Environment Canada and the Department of Regional and Industrial Expansion.

Under the aegis of the Ministry of State for Science and Technology, the project would be an outgrowth of an international program launched last year by the International Institute of Applied Systems Analysis. The Vienna-based institute is an east-west think tank suggested by the late U.S. president Lyndon B. Johnson in the early 70s during the beginning of detente between the U.S. and the Soviet Union.

UBC's Dr. C.S. Holling has just returned to the University after three and one-half years as director of the institute, its first Canadian director.

Austrian Federal president Dr. Rudolf Kirchschäger will present Dr. Holling with the Austrian Cross of Honor for Science and Art for his contributions to the institute.

"The institute initiated the project because it is concerned about the ability of the planet's biosphere — the global mantle that supports life — to sustain economic development," said Dr. Holling.

"The stakes are extremely high. Failure could have widespread and devastating economic consequences. Environmental degradation could undermine economic development."

He emphasized that the problem is also an opportunity. If the international, long-term environmental project is successful, economic development could proceed in a way that balances sustainability with efficiency.

"As scientists, we may be able to predict that a certain industrial policy will be successful — that it won't have a detrimental effect on the environment which could jeopardize future industrial activity — with a certainty of about 70 per cent.

"Now if we are considering only a local industry and a local effect, politicians and resource managers may be willing to run that magnitude of risk. But no one," Dr. Holling said, "should be willing to take a 70-30 per cent chance of success or failure if the results are global rather than local.

"Seventy per cent is about the upper limit of our ability as scientists to make ecological predictions at the present time."

Dr. Holling cited a number of current issues that involve industrial development and the biosphere on a continental or planetary scale — the impact of acid rain on the productivity of forests, the consequences for agriculture of increased amounts of carbon dioxide in the atmosphere causing an increase in the earth's temperature, and the possibility of a "nuclear winter" caused by atmospheric debris from a nuclear war blocking light and heat from the sun.

While director of the institute, he was told by advisors to national leaders that they were no longer searching for solutions to familiar problems. Instead, they were trying to determine what were the significant problems facing their countries.

"Traditional policy, management and scientific analysis do little to alert political leaders of imminent shocks or surprises, such as the oil price shocks in the early 70s," he said.

What is needed is research that will identify early warning signs that a

"surprise" is around the corner and that will separate those issues that have some probability of occurring from those that are unlikely, he said.

He said what is needed is the environmental equivalent to the extensive interdependent economic relations that developed at the end of the Second World War.

"With the expansion of industry and agriculture came a variety of international economic agreements. These included the Bretton Woods agreement of 1944 and subsequent creation of the International Monetary Fund and the World Bank. It also included multi-national businesses and supranational authorities like the European Economic Community.

"Nothing like this exists for environmental regulation.

"The first generation of environmental problems were local," Dr. Holling said. "Pollution of Lake Bailal in the USSR and Lake Erie in North America, for example, are large local problems on a scale that is essentially reversible. And the cost of reversibility is low enough to be absorbed.

"But the second generation of environmental difficulties is international. Air pollutants travel hundreds — even thousands — of kilometers from their source, and the cost to reverse them is enormous.

"We are now facing a third generation of problems or opportunities — such as acid rain or the greenhouse effect. They are a different sort of magnitude than anything that has existed before. The costs of remedying the situation are enormous and the trend may not be

Workshop on management of records set

Effective record keeping is essential in any organization, but for records officers in B.C.'s 12 municipal police departments, the efficient management of documentation is particularly crucial.

To help police and RCMP officers in the province develop and enhance strategies for dealing with the massive amounts of documentation involved in public safety operations, UBC's Faculty of Law is holding a workshop on Tuesday, May 7, on "B.C. Police Records: Saving, Storing, Shredding."

"Police departments in B.C. save far more material than their counterparts in other provinces and the U.S.," says UBC law professor DeLloyd Guth, who organized the workshop. "Because they deal with such a substantial amount of information, and because their decisions on what to save and what to destroy have a profound effect on public safety, it is essential that police records officers have up-to-date information on records management. The public needs to realize how vital police records and record-keeping procedures are for effective prevention of crime."

Dr. Guth said the goal of the workshop is to bring records officers from the RCMP and B.C.'s 12 municipal police departments in contact with professional archivists and records scholars to discuss specific, practical strategies for maintaining records.

The workshop will cover a wide range of topics, including confidentiality of records, public access, classification systems and the impact of computerization on police records.

The day-long workshop is supported by a grant from the B.C. Heritage Trust.

reversible."

He warns against short-term solutions. In New Brunswick, spruce budworm attacks against spruce and balsam have been successfully defeated through the use of insecticides. And the forest industry there is benefiting. But the long-term consequence is a forest more vulnerable to more intensive and extensive outbreaks. Spraying insecticides is not a sustainable policy.

Insecticides have also won short-term victories against malaria-spreading mosquitoes. The result is that human populations are now less immune to the disease while some of the mosquitoes are immune to the insecticides.

Dr. Holling was director of UBC's Institute of Animal Resource Ecology from 1969 to 1974 and is now a professor in the institute and in UBC's zoology department. He has an international reputation for developing new analytical techniques, chiefly



Prof. Crawford "Buzz" Holling

involving computers, and for training a new type of interdisciplinary scientist, capable of managing natural resources in the broadest sense.

Confused about computers? Help available at centre

Most campus departments are making increasing use of computers in their operations, and the transition into the world of terminals, serial ports, printers and disk drives can be confusing to the newcomer. But help is available at the new Product Centre, a division of UBC's Computing Centre.

The Product Centre was established in January of this year and functions as a cost-recovery operation. "Our principal mandate is to supply microcomputer, computer terminal, printer and modem products to the University," says Ed Froese of the Computing Centre. "The broader goal of the Product Centre is to integrate the advisory and sales aspects of the centre with the analysis, planning and development activities of the Computing Centre."

Mr. Froese outlines some of the activities of the Product Centre, which he says is in "a formative stage of development."

- **Product Analysis.** The products selected for sale in the Product Centre are a reflection of careful analysis by the professional staff of the Computing Centre. The staff evaluates products best suited to meet the needs of the University community.

- **Product Demonstration.** Products sold by the centre are available for trial use by members of the University. Staff members are on hand to demonstrate the use of the products and answer general questions.

- **Equipment Maintenance and Repair Services.** Warranty service for products sold by the Product Centre is provided by the Hardware Services Group in the Computing Centre. After-warranty maintenance contracts are also available in many cases.

- **Consultation/Referral.** The Product Centre serves as a public contact point for members of the University who are unfamiliar with the services and resources of the Computing Centre.

- **Networking.** The interconnection of microcomputer and mainframe computer systems through data networks for information exchange is of major importance. Products sold in the centre are selected with networking in mind, and priority is given within the Computing Centre to the development of network support for products sold in the Product Centre.

- **Software.** The Product Centre at present handles a limited selection of software, but an enormous amount of software is being developed for microcomputers by independent authors.

To deal with this situation, the Data Library, which is operated jointly by the Computing Centre and the Library, will begin this year to develop a library of software which will be available to members of the University for evaluation. Selected software could subsequently be ordered through the Product Centre.

- **Education.** The Product Centre plans to coordinate orientation presentations for the primary products it handles. These seminars will supplement the non-credit courses offered by the Computing Centre.

Goods must be ordered by departments and grant-holders on blue requisitions. Small items such as modems are usually supplied from stock. A limited number of larger items such as microcomputer systems will be kept in stock for customers who wish to take orders away immediately, but in general the Product Centre plans to arrange for the delivery of orders from off campus within 48 hours.

The Product Centre is currently introducing Zenith personal computers to the University through the Direct Account Program for Education Institutions. Cost of a typical IBM PC compatible system is \$2,600 plus provincial sales tax. Because the price to the Product Centre is fixed in U.S. dollars the selling price is subject to change. Initial deliveries are expected in June, 1985.

If you'd like more information about Zenith personal computers or other equipment available at the Product Centre, call Mary-Jean Hood at 228-3429.

Blue jeans subject of museum display

The Museum of Anthropology is currently sponsoring a unique exhibit entitled "Blue Jeans", developed by students in Anthropology 431 (museum principles and methods).

"Some people have expressed surprise at finding blue jeans featured at a museum," says public relations officer Ruth Anderson, "but we like to explore unusual and interesting aspects of commonplace objects as well as rare objects from around the world."

A highlight of the exhibit is a large soft sculpture created by one of the participating students.

Cutbacks threat to morale, Senate told

UBC's Senate was told last week that possible cutbacks in academic programs pose a serious threat to campus faculty morale.

Two Senators, speaking in a debate on a report from Senate's budget committee, said the morale question was becoming a serious issue.

Prof. John Dennison of the Faculty of Education said that over the past eight months there had been an understandably high level of anxiety on campus because of uncertainty about the future. "The inability to have any confidence in the future is destructive to human motivation," he said.

Prof. Luis de Sobrino of the physics department echoed Prof. Dennison's remarks later in the meeting when he said that the greatest threat of cutbacks lay in the potential it had for damaging faculty morale.

He added that he hoped that when decisions were made about cuts that there would be a full explanation of the reasons for making such cuts.

Both speakers were commenting on a report requested by Senate in March asking for full details of the criteria that will be used to arrive at recommendations for the curtailment or elimination of any academic programs.

The Senate budget committee's report of last week provided more details and clarified a number of sections of a

three-part document approved by Senate in March and September of 1983, which included under the heading of "Academic Plan," a framework to be used by the University in relation to its academic activities, "whatever its financial circumstances happen to be."

Dr. Richard Spencer of the Department of Civil Engineering said the distinction made by the budget committee in its original report between core, core-related and non-core activities was "not helpful."

As an example of a core activity, he cited English 100, which Senate requires all students to take. "That implies that we need an English department," he said, "and it should be easy to draw up a short list of departments which could be classified as core because they provide instruction which is essential to other programs."

He also took issue with a clause that describes core-related programs as activities that in themselves do not develop "major new concepts." He said his own faculty, engineering, "might be classified as core-related," but to suggest it does not develop major new concepts "seems to me wrong."

He added that the distinction to be made is that core or core-related activities can clearly not be eliminated,

"but that doesn't mean they can't be reduced in scope."

The urgency of providing new space for books in UBC's Library system was the subject of two reports to Senate at its April meeting.

Senate approved recommendations from its academic building needs committee asking the president to:

- Give "very high priority" to new library space in the University's plans for capital fund raising; and
- Give high priority, "as a matter of urgency," to the library expansion as a project for private fund raising, "and that every effort be made to invoke government co-operation and participation along with private sources."

Prof. John Stager, who chairs the academic building needs committee, recalled that Senate had endorsed recommendations on the need for library space on three occasions in the past.

Referring to the current situation, he said UBC has a backlog of building projects totalling some \$226 million, including a Library proposal of \$53.5 million, before the Universities Council of B.C. The council, he said, in its capital plan for 1989, has selected and given various priorities to about \$125 million of UBC's list not including the Library.

And the provincial ministry in

Victoria, he added, has a five-year plan that includes only \$66 million for UBC.

Despite these plans, Senate was told, "the fact is that we have little or no assurance of what projects will be supported by public funds, and certainly the Library expansion is so distant as to be below the horizon."

Two Senators asked that information be provided to Senators about other buildings on the list before UCBC so that the Library project could be seen in context.

The second report to Senate came from its Library committee and was presented by Prof. Jon Wisenthal of the English department, who said that UBC's Library situation would become "utterly impossible" over the next six years unless new space was provided.

Some divisions and branches of the Library have already reached "full working capacity," he said, which means that a library's shelves are 85 per cent full. "Beyond this degree of fullness the collection becomes very costly to manage, involving excessive moving and re-moving of materials and consequent wear and damage," according to the Senate committee's report.

Seven collections are listed in the report as being at or within 18 months of full working capacity — fine arts, special collections, humanities and social sciences reference, MacMillan, music, mathematics and the Marjorie Smith library in the School of Social Work.

UBC CALENDAR

Items for inclusion in the Calendar listing of events must be submitted on proper Calendar forms. Forms are available at the Community Relations Office, Room 207 of the Old Administration Building, or by calling 228-3131.

The Librarian,
 Special Collections Division,
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MONDAY, MAY 6

Chemical Engineering Seminar.

Frictional Pressure Drop for Two-Phase Flow in Pipes — A New and Extremely Convenient Correlation. Hans Muller-Steinhagen, Chemical Engineering, UBC, Room 206, Chemical Engineering Building. 1:30 p.m.

Biomembranes Discussion Group/ Chemistry Seminar.

NMR and Fluorescence Studies of Lipid Systems — Model Membranes and Cubic Liquid Crystals. Prof. Goran Lindblom, Physical Chemistry Laboratory, University of Umea, Sweden. Lecture Hall 3, Woodward Instructional Resources Centre. 2:30 p.m.

Pharmaceutical Sciences & Pharmacology Seminar.

Some Aspects of and An Example of Drug Design — Analgesic Receptor Agonists and Antagonists. Prof. Edward E. Knaus, Pharmacy and Pharmaceutical Sciences, University of Alberta. Room 160, Cunningham Building. 3:30 p.m.

TUESDAY, MAY 7

Pharmaceutical Sciences & Pharmacology Seminar.

Nitrobenzene, Pyridine and 1,2-Dihydropyridine Isosteres and Their Use in the Design of Calcium Channel and Histamine H₂-Receptor Antagonists. Prof. Edward E. Knaus, Pharmacy and Pharmaceutical Sciences, University of Alberta. Lecture Hall 1, Woodward Instructional Resources Centre. 12:30 p.m.

Asian Studies/Religious Studies Lecture.

My Forty Years of Anthropological Research in China. Li Shiya, editorial board, Lishi Jiao-Xue (historical education), Tianjin, China. Room 604, Asian Centre. 1:30 p.m.

WEDNESDAY, MAY 8

Psychology Colloquium.

Brain Games and the Assessment of Brain Damage. Dr. Graham Goddard, Psychology, University of Otago, New Zealand. Room 2510, Douglas T. Kenny Building. 4 p.m.

THURSDAY, MAY 9

Medical Grand Rounds.

The Nutritional Aspects of Calcium. Dr. Jarol Boan, Medicine, Health Sciences Centre Hospital, and Dr. B. Lynn Beattie, Geriatric Medicine, Health Sciences Centre Hospital. Lecture Theatre, Room G279, Acute Care Unit, Health Sciences Centre Hospital. 12 noon.

Health Care and Epidemiology Seminar.

Cost Effectiveness in the Diagnosis and Treatment of Carcinoma of Unknown Primary Origin. Prof. Roberta LaBelle, Clinical Epidemiology and Biostatistics, McMaster University. Room 253, James Mather Building. 12:30 p.m.

Obstetrics and Gynaecology Teaching Rounds.

PMS and Androgens. Dr. Timothy Rowe, Obstetrics and Gynaecology, UBC, Room 2141, Grace Hospital. 1:30 p.m.

SUNDAY, MAY 12

Concert.

The Vancouver Youth Symphony Intermediate and Junior Chamber Orchestras give their final concert of the season. Tickets are \$4 general admission, \$2 for students and seniors, and are available at the door. Old Auditorium. 2 p.m.

Concert.

Music of Mozart, Brahms and Faure. Camille Churchfield, flute; Steven Dann, viola; Wesley Foster, clarinet; Robert Silverman, piano; Gwen Thompson-Robinow, violin, and Eric Wilson, cello. Admission is \$5. Recital Hall, Music Building. 2:30 p.m.

TUESDAY, MAY 14

Biochemistry Seminar.

Enzyme Catalyzed Covalent Modifications — Chemistry and Regulatory Aspects. Dr. Don Graves, Biochemistry and Biophysics, Iowa State University. Lecture Hall 3, Woodward Instructional Resources Centre. 4 p.m.

WEDNESDAY, MAY 15

Biochemistry Seminar.

Intracellular Pathways Controlled by Phosphatidylinositol Turnover. Dr. C.J. Malemud, Medicine, Case Western Research University. Room 4210, Block A, Medical Sciences Building. 4 p.m.

THURSDAY, MAY 16

Environmental Hygiene Seminar.

Respiratory Lung Disease: Cotton Dust Exposure. Dr. R.R. Rylander, Environmental Hygiene, University of Gothenburg, Sweden. Room 123, 2775 Heather St., Main Floor, (Old Doctor's Residence, part of VGH). 12 noon.

Concert.

Music of Stravinsky, Reinecke and Brahms. Roger Cole, oboe; Steven Dann, viola; Wesley Foster, clarinet; Christopher Millard, bassoon; Eric Ralske, horn; Robert Silverman, piano; Gwen Thompson-Robinow, violin, and Eric Wilson, cello. Admission is \$5. Recital Hall, Music Building. 8 p.m.

Biochemistry Seminar.

Phosphorylcholine-Binding Protein and its Relation with Serum Lipoproteins. Dr. Sailen Mookerjee, Biochemistry, Memorial University, Newfoundland. Room 4210, Block A, Medical Sciences Building. 12 noon.

Pacific Coast Lectureship in Chemistry.

From Crystal Statics Towards Molecular Dynamics. Prof. Jack Dunitz, Organic Chemistry Laboratory, Swiss Federal Institute of Technology — E.T.H., Zurich. Room 250, Chemistry Building. 4 p.m.

FRIDAY, MAY 17

Physics Lecture.

Macromolecules Dissolved in a Lamellar Lyotropic Liquid Crystal. Dr. Bernard Cabane, Université de Paris-Sud, Orsay, France. Room 318, Hennings Building. 11:30 a.m.

Medical Genetics Seminar.

Molecular Approach to the Understanding of Lipoprotein Disorders. Dr. Annette Kessling, St. Mary's Hospital, London, England. Parentcraft Room, Main Floor, Grace Hospital. 1 p.m.

Notices . . .

TRIUMF Tours

TRIUMF, at the south end of Wesbrook Mall, houses the world's largest cyclotron. (A cyclotron accelerates large numbers of atom-sized particles almost to the speed of light. The particles are then shot at various targets, and the ensuing nuclear reactions are studied.) Beginning May 1, you or your friends may take a free tour of the cyclotron and the experimental areas at 11 a.m. or 2 p.m. daily, except on weekends or holidays. Your tour will last approximately 1½ hours. Note that a tour would not likely be interesting to children under 14, and also that pregnant or physically handicapped persons would have difficulty with parts of the route. Please contact the TRIUMF Information Office (222-1047) in advance if you intend to come for a tour with more than four persons, so that extra guides can be arranged if necessary.

Operation Raleigh Canada

Over the next four years, an international scientific expedition will circumnavigate the world. Operation Raleigh is divided into 16 three-month phases, each to be centered in a different location. The 1,900-ton research support vessel will proceed around the globe westward, mainly at tropical latitudes. Research will range from fundamental studies to highly applied projects tied in with community tasks to resource management work of wider significance. Operation Raleigh Canada is encouraging faculty and graduate students from UBC to participate in this unique expedition. For more information contact Barbara Jackson or Anna French at 688-2778.

Asian Centre Exhibit

Karma of the Brush, an exhibition of Chinese and Japanese calligraphy, will be on display at the Asian Centre April 29 to May 12. For further information call 228-2427 or 228-2746. Admission is free. Open 11 a.m. to 6 p.m. daily.