

PETER WALL
INSTITUTE FOR
ADVANCED
STUDIES

ANNUAL REPORT
1999-2000



The Peter Wall Institute for Advanced Studies supports basic research through interdisciplinary initiatives that have the potential to make important advances in knowledge. The Institute brings together researchers from The University of British Columbia with distinguished scholars from around the world to conduct fundamental research drawing upon and contributing to a wide range of diverse disciplines. The Institute aims to create a community of scholars, composed of outstanding researchers across the whole campus, who will contribute significantly to the intellectual life of The University. Of overriding concern in all Institute activities is excellence in research characterized by being fundamental, interdisciplinary, innovative, and unique.

PETER WALL INSTITUTE FOR ADVANCED STUDIES

Annual Report 1999 – 2000

(July 1, 1999 – June 30, 2000)

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DIRECTOR'S MESSAGE

IN PREVIOUS YEARS, HAVING NO FACILITIES OF OUR OWN AND FOCUSING ON PROGRAMS THAT PROVIDED GRANTS TO INNOVATIVE TEAMS OF RESEARCHERS, THE PETER WALL INSTITUTE FOR ADVANCED STUDIES WAS OFTEN REFERRED TO AS THE WALL FOUNDATION. NOW ESTABLISHED IN OUR OWN SPACE AT THE UNIVERSITY CENTRE, WE HAVE BEEN ABLE TO DEVELOP PROGRAMS THAT ARE BUILDING A TRUE INSTITUTE. A PRIME REQUIREMENT OF THESE “RESIDENTIAL” PROGRAMS IS ATTRACTING THE MOST OUTSTANDING RESEARCHERS TO SPEND TIME AT THE INSTITUTE. DEVELOPING SUCH PROGRAMS HAS BEEN A MAJOR EMPHASIS THIS YEAR.

In the fall Michael Smith moved into an office at the Institute. Michael is Peter Wall Distinguished Professor and 1993 Nobel Laureate in Chemistry, as well as chair of the Institute Advisory Committee. His regular presence at the



Ken MacCrimmon, Director
Peter Wall Institute
for Advanced Studies

Institute was a key signal externally as well as being important for his availability to discuss issues relating to the Institute. The other Peter Wall Distinguished Professor, Raffi Amit, took a leave to spend time at the Wharton School, University of Pennsylvania. Then, just this month, he announced his resignation from UBC to accept a full-time position at Penn. His helpful advice on a variety of matters will be greatly missed.

The Scholars in Residence program was also an important factor in contributing to the on-going presence of researchers at the Institute. The initial cohort, which moved in when our facilities opened in March 1999, continued throughout the calendar year. In mid-year we held a competition for the year 2000 cohort and had outstanding applicants. The new set of Scholars who have been in residence during the past six months (and will remain until the end of 2000) are: William Hsieh (Earth & Ocean Sciences, Physics), Patricia Marchak (Sociology), Peter Suedfeld (Psychology), and John Willinsky (Language & Literacy Education). One new requirement in the application process is that the scholars are asked to provide information on particular activities (e.g., workshops) that they would initiate to contribute to the intellectual life of the Institute. As with all of the programs I will mention, more details can be found further in this Report.

One of the most exciting events occurred at the beginning of the academic year. In July 1999 the first cohort of ten Visiting Junior Scholars arrived at the Institute. They were chosen from nominations by UBC departments on the basis of their research accomplishments and promise. The objective was to select rising research stars from any discipline anywhere in the world. They had to be within three years of their completed PhD and have no previous UBC connection. There was no attempt to have a theme connecting any of them—it was a matter of selecting the most qualified candidates without regard to discipline. The disciplines represented were: Animal Studies, Biology, Education, History, Law, Literature, Philosophy, Political Science, Psychology, and Women's Studies. There was also a geographical dispersion with Canada, England, Germany, Scotland, and the United States being represented. It was a

*Research is to see what
everybody else has seen, and
to think what nobody else has
thought.*

ALBERT SZENT-GYORGI

very active month. A typical day would begin with breakfast as early as 8am, working in their rooms or going off to their sponsoring department in the morning, coming back to the Institute for lunch and a post-lunch talk, more research in the afternoon, meeting for dinner, having a post-dinner talk or discussion session, followed by socializing. It wasn't all work, we had weekend excursions to Whistler and to Galiano Island as well as other social events. All in all, it was a very intense, successful month.

The success of the Visiting Junior Scholar program led to a consideration of how a similar program might be created for junior faculty at UBC. Hence, in the fall, we announced a competition for an Early Career Scholars program involving UBC faculty in two distinct sub-programs. One sub-program is for Assistant Professors within the first two years of their appointment, while the other sub-program is for Associate Professors within two years of being promoted to Associate and being tenured. The response to both programs has been very strong. We received 23 applications for the 6 positions at the Assistant level and 12 applications for the 6 positions at the Associate level. The selection was difficult among such outstanding candidates even when we decided to expand the number in the Assistant Professor cohort to 10. In the selected groups, a wide range of disciplines was represented. The program begins in September 2000 and we look forward to some exciting sessions.

Note that all the programs described above are deliberately non-thematic. There is no attempt to choose people based on disciplinary background. Rather we seek to select the "best and the brightest". There is, of course, a self-selection. Individuals who are not interested in interacting with other researchers in very different areas are not likely to apply or allow themselves to be nominated. Thus, the fact that such excellent candidates are available for all these programs is a very good signal about how individuals with outstanding research qualifications in particular fields are anxious to spend time learning about the work of others in very different areas and to share their own expertise when there is no immediate prospect of any measurable research output.

Another forum for sharing ideas occurs every two weeks with our Associates gatherings. On these occasions we invite



*Everything of importance has
been said before by somebody
who did not discover it.*

ALFRED NORTH WHITEHEAD

*Creating a new theory is not
like destroying an old barn
and erecting a skyscraper in its
place. It is rather like climbing
a mountain, gaining new
and wider views, discovering
unexpected connections
between our starting point
and its rich environment.*

ALBERT EINSTEIN

the Institute Associates to come together for lunch or dinner followed by a talk given by an Associate. This year we had seven lunches and twelve dinners with a wide range of participants and speakers. Nine of the speakers were from the Arts/Social Sciences, seven from the Sciences, and three from professional Faculties. Over the course of the year, more than 70 of the 110 Faculty Associates attended at least one of the events. These sessions are recognized as making a significant contribution toward building a sense of a University-wide community. The Sage Bistro continued to provide excellent meals—on some occasions seven courses.

A notable event during the year occurred when the Institute was a prime host for the 40th Anniversary of the Gairdner Awards which are given, on an international basis, to outstanding medical researchers. John Cairns (Dean, Faculty of Medicine), Judith Hall (Head, Pediatrics, Medical Genetics), and Michael Smith initiated a proposal for supporting the Gairdner Awards which would bring current and past Gairdner winners, including several Nobel laureates, to campus in October. While this proposal did not fit with any of our standard programs, it seemed like an excellent prospect for funding through a Trustee Initiative. Indeed, Peter Wall agreed to sponsor it. It was a very successful event.

The thematic programs continue to go well. In fact, this year we awarded two Major Thematic Grants. Our plan has been to make one of the \$500,000 awards each year but two of the submitted proposals were so good that our Adjudication Committee decided to fund both of them. While they sound similar, both having the word “disease” in the title, they are very different. The project “Pathogenomics: An Interdisciplinary Approach for the Study of Infectious Disease”, headed by Ann Rose, involves top geneticists, biochemists, molecular biologists, and others. The focus in this project is on identifying the genetic causes of disease and exploring treatment possibilities. The project “An Interdisciplinary Inquiry into Narratives of Disease, Disability and Trauma”, led by Valerie Raoul, is based in the humanities. The emphasis here is on understanding how people think about, and describe, the diseases that affect themselves and others. Our first two Major Thematic Grants, “Crisis Points and Models of Decision” and “Electron Motion in Matter” are very active and are making important

contributions. The Crisis Points group has adopted a practice of going to, and talking at, major academic meetings as an identifiable team.

Our first funded Catalytic Visitor was Gideon Davies, Royal Society University Fellow from the University of York in Britain. Steve Withers and Tony Warren successfully proposed bringing Gideon in to work on the project “Enzymatic Glycosyl Transfer”. He has been actively involved here since January.

In the Fall 1999 and Spring 2000 Exploratory Workshop competitions we received a total of 13 applications, of which we funded seven. The first six months of this year did not seem to be popular for running Exploratory Workshops, but we had seven in the last half. Each Workshop had a broad base—the core team averaged about six UBC faculty members from various Faculties and departments. Even just looking at the home department for each Principal Investigator, we can see a range of disciplines represented: Audiology, Comparative Literature & English, History, Zoology & Psychiatry, Asian Studies, and Geography. In all cases a number of international experts were brought to campus as active participants in each Workshop. It should be remembered that our Workshops are oriented toward developing a joint research agenda and hence are highly interactive rather than the standard format of presenting individual papers.

The University Centre facilities are working out very well for us. We have a prime location with wonderful views of the mountains and ocean. In anticipation of the Visiting Junior Scholars using the residential rooms as offices, we equipped all the rooms with computers, basic software, high-speed web access, and voice mail. The quality of the rooms has made them particularly attractive for distinguished visitors who wish to stay on campus. The high lease costs charged by the University require us to generate rental income from others when we are not using the space. Responding to a request from Sage Bistro which occupies the main floor (we are on the top floor) we turned the booking operation over to them for several months. However, they did not seem to be able to respond as efficiently to requests as we expected, hence we took back the operation. Several temporary booking clerks were very helpful. Things really began to flourish when Katie

*As a working hypothesis
to explain the riddle of our
existence, I propose that our
universe is the most interesting
of all possible universes, and
our fate as human beings
is to make it so.*

FREEMAN DYSON

Eliot was appointed as full-time Institute secretary in March 2000. She has been very effective in handling both the booking and program aspects of the position. Chris McGill continues to do an excellent job in overseeing all the administrative aspects of the Institute, particularly the facilities and the financial matters. This year Dale MacCrostie, our systems administrator, had extra operating responsibilities with the new residential programs and has done a very good job of maintaining general computing requirements as well as overseeing the development of our new web site (check it out at www.pwias.ubc.ca).



THE PROGRAMS OF THE INSTITUTE CAN BE CHARACTERIZED INTO TWO MAIN CATEGORIES: THEMATIC AND RESIDENTIAL. THEMATIC PROGRAMS INVOLVE ESTABLISHING AN OVERALL RESEARCH THEME WITHIN WHICH SCHOLARS WITH THE RELEVANT EXPERTISE ARE GATHERED TOGETHER.

The first thematic program is the Major Thematic Grant which provides funding of up to \$500,000 over three years to a broadly-based interdisciplinary team. The program was announced in 1994 but the first award was not made until 1996.

In 1997, an Exploratory Workshops program was established to lead into the Major Thematic Grant. The Exploratory Workshops provide funding for top UBC researchers to come together with outstanding experts from around the world to explore the possibilities of developing a research agenda in a new field. This allows the UBC participants to draw upon, and perhaps draw in, the most outstanding researchers in the world on the thematic topic.

The Catalytic Visitor program has similar objectives to the Exploratory Workshops, bringing UBC and international experts together, but it has a somewhat different form. Exploratory Workshops generally involve a group of 5-10 international experts being brought in for a workshop of several days' duration whereas the Catalytic Visitor program focuses on bringing in one visitor for one or two academic terms. The underlying rationale is that in some cases the research endeavour is better served by having a single person brought in to provide leadership over an extended period.

The Theme Development Workshops are the fourth thematic program. These sessions involve making our facilities available on an informal basis to groups of UBC

faculty who want a focal point for attracting colleagues to work with them in the initial stages of probing a thematic topic. It should be noted that all of these thematic programs are of a “bottom up” form, in that UBC faculty are encouraged to propose the thematic topic that they want to work on—the themes are not created as fundable topics by the Institute itself.

The scope of the programs differs as shown in the following table. The programs that were introduced for the first time this year are bolded, those operated for the first time are italicized.

DURATION	THEMATIC PROGRAMS	RESIDENTIAL PROGRAMS
Years	Major Thematic Grant	Distinguished Professors
Months	<i>Catalytic Visitors</i>	Scholars in Residence; Early Career UBC Scholars
Days	Exploratory Workshops	<i>Visiting Junior Scholars</i>
Hours	Theme Development Workshops	Associates Gatherings; Weekly Colloquia



Major Thematic Grants

The Major Thematic Grant (MTG) provides funding of \$500,000 over a three-year period to an interdisciplinary team of UBC and external scholars pursuing research in a new area. This research must be basic, and have the potential to provide new theoretical knowledge. Applications are accepted from UBC faculty in the spring and fall of each year, and are first appraised by an internal Adjudication Committee drawn from top researchers in all Faculties at UBC and then short-listed proposals are evaluated by at least ten international external experts. It is expected that MTG applicants will have first applied for and received an Exploratory Workshop, or Catalytic Visitor grant, or the equivalent. Two MTGs were awarded prior to this year.

After a careful internal and external review of the applications received at the Spring 1999 Thematic Competition, two major thematic grants were awarded.

An award was made to the project *“Pathogenomics: An Interdisciplinary Approach for the Study of Infectious*

Disease”, principal investigator Dr. Ann M. Rose (UBC Medical Genetics). This application developed directly from the 1997 Pathogenomics Exploratory Workshop led by Dr. Rose and funded by the Peter Wall Institute.

This project utilizes new genomic and bioinformatics tools (hence the new field of Pathogenomics) to identify pathogen genes that interact with their host proteins and pathways. Informatics, evolutionary biology, microbiology and eukaryotic genetics are being used to identify pathogen genes that are more similar to host genes than expected and likely to interact with, or mimic, the host’s gene functions. The project is building a database of the sequences of these proteins, based on the increasing number of pathogen genomes that have been or are being sequenced. Candidate functions identified through the informatics approach will be tested in the laboratory to investigate their role in pathogen infection and host interaction.

A few of the many pathogens being studied (and their primary disease) are: *Yersinia pestis* (plague), *Salmonella typhi* (typhoid fever), *Neisseria meningitidis* (meningitis), *Helicobacter Pylori* (peptic ulcer and gastritis), *Borrelia burgdorferi* (Lyme disease) and *Streptococcus pyogenes* (strep throat and scarlet fever). The findings of the project will be made publicly available in a Pathogenomics Database. The Pathogenomics website at <http://www.pathogenomics.bc.ca/> provides details on the project and on PhyloBLAST, a new sequence analysis tool made publicly available. PhyloBLAST enables researchers to compare a protein sequence to a SWISSPROT/ TREMBL database using WU-BLAST2 and then allows them to perform user-defined phylogenetic analyses based on selected proteins listed in the BLAST output.

The research team, led by Ann Rose, includes the following UBC researchers: Robert Hancock (Microbiology & Immunology); Brett Finlay (Biotechnology Laboratory); Rachel Fernandez (Microbiology & Immunology); Steven Jones (BC Genome Sequence Centre); Donald Moerman (Zoology & Biotechnology Lab); Sally Otto (Zoology); Francis Ouellette (Centre for Molecular



Pathogenomics Project research team.

Ann Rose, Principal Investigator,
third from left.

Medicine & Therapeutics); Julian Davies (Microbiology & Immunology - Emeritus; President, TerraGen Diversity Inc.); Yossi Av-Gay (Infectious Diseases, Faculty of Medicine) and Iain Taylor (Botany). External participants in the Pathogenomics project include: Frederick Blattner (Genetics Laboratory, U. of Wisconsin); Ken Sanderson (Biological Sciences, U. of Calgary); Tatiana Tatusov (NCBI, National Institutes of Health); David Baillie (Molecular Biology & Biochemistry, Simon Fraser U.); Bart Barrell (Sanger Centre, UK) and Ford Doolittle (Biology, Dalhousie U.).

The second major thematic grant of the Spring 1999



competition was to the application "*An Interdisciplinary Inquiry into Narratives of Disease, Disability and Trauma*", principal investigator Dr. Valerie Raoul (UBC Centre for Research in Women's Studies and

Gender Relations). The project is undertaking cross-cultural and trans-historical comparative analyses of individual texts or categories of stories, placing them in their larger discursive and sociopolitical contexts in order to address the philosophical, ethical, and political issues related to the cultural construction and representation of experiences of disease, disability and trauma.

This project has three distinct but overlapping stages of inquiry: 1. selecting, contextualizing and analyzing a corpus of texts of various types; 2. elaborating a method of analysis; 3. assessing the implications of the results of the analyses. All three stages raise questions related to the degree of importance attached to aesthetics, ethics, and therapeutics as essential elements of these narratives. The focus of several interdisciplinary sub-projects is cross-disciplinary, trans-historical, or the comparison of narratives told in different forms or media. Narratives will be selected from diverse origins and include examples in forms such as film, photography, art, dance, installations and artifacts, as well as words. Through these analyses it is expected that the project will make an original contribution to the broader analysis of medical discourse, social structures and codes, and qualitative social science research.

The researchers involved in this project come from an

Word-work is sublime, she

thinks, because it is

generative;

it makes meaning that secures

our difference, our human

difference – the way in which

we are like no other life.

TONI MORRISON.

extraordinarily diverse range of disciplines: English, Women's Studies, Nursing, Medical Anthropology, French, Psychiatry, Rehabilitation Sciences, Educational Studies, and Sociology. As a result of this diversity, the range of research questions emerging is equally diverse: Who creates narratives and why? Who watches them and why? How are narration and reception determined by socio-historical contexts? What is the function of narrating for the narrators, for those close to them, or for those counseling or treating them? What questions are raised in these stories and how do they relate to the chosen form? What are the variables due to period and place, or to the gender, age, race, or other circumstances of the subject, including nature of the illness or disability?

An ongoing part of the project is the development of an extensive bibliography of primary and secondary texts concerned with narratives of disability, disease and trauma. This and an extensive glossary of narrative terms are available on the project website at <http://www.wallnarratives.pwias.ubc.ca>.

Joining Valerie Raoul on this project are, from UBC: Connie Canam (School of Nursing); Isabel Dyck (School of Rehabilitation Sciences); Susanne Egan (English); Janice Graham (Anthropology); Angela Henderson (School of Nursing); Gloria Onyeoziri (French, Italian & Hispanic Studies); Susan Penfold (Psychiatry); Judy Segal (English, Interdisciplinary Science Studies) and Patricia Vertinsky (Educational Studies). External participants in the project include Ross Chambers (French, U. of Michigan); Thomas Couser (English, Hofstra U.); Martine Delvaux and Barbara Havecroft (Literary Studies, U. of Quebec); Julie Leblanc (French, U. of Toronto); Patricia Prestwich (History, U. of Alberta); Mary Lynn Stewart (History and Women's Studies, Simon Fraser U.) and Susan Wendell (Philosophy and Women's Studies, Simon Fraser U.).

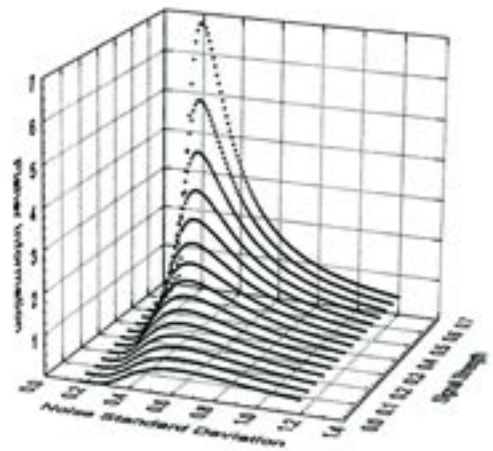
Major Thematic Grant Updates

1999–2000 was the third year of the project "*Crisis Points and Models of Decision*" led by Dr. Priscilla Greenwood (UBC Mathematics). The Crisis Points 'Complexity Group' has continued its series of bi-weekly talks by team members and visiting researchers. A summary of the Complexity Group seminars can

*Creativity is allowing
yourself to make mistakes.*

*Art is knowing which
ones to keep.*

SCOTT ADAMS



be found in Appendix A. Highlights of the year's activities were the two extended visits by Prof. Frank Moss, Center for Neurodynamics, University of Missouri at St Louis.

Two projects were undertaken by Crisis Points members in collaboration with Frank Moss. Professors Cindy Greenwood (Mathematics) and Lawrence Ward (Psychology) collaborated with Moss on the application of the Greenwood et al. stochastic resonance model to data that Moss and his colleagues have collected on the capture of *Daphnia* by paddlefish (published in *Physical Review Letters*, 10/99). The application was able to demonstrate that several qualitative aspects of the data were predicted by the variation of the Fisher Information with the distance d , of the *Daphnia* from the fish. The second collaboration, involving Ward and Moss, was on the design of two experiments to reveal stochastic resonance in the detection or discrimination of sub-threshold sensory signals by whole human beings.

This was also the third year for the major thematic project "*Understanding Electron Motion In Matter: Orbital Imaging of Biomolecules, Transition Metal Complexes, Chemically Reactive Species and Condensed Matter*" led by Dr. Chris Brion, (UBC Chemistry). The project research team held its annual symposium October 1, highlighting their individual and collaborative work over the past year (see Appendix A: Electron Motion in Matter October 1999 Symposium, for a detailed list of presentations).



We are all agreed that your theory is crazy. The question which divides us is whether it is crazy enough to have a chance of being correct. My own feeling is that it is not crazy enough.

October 1999 Major Thematic Competition

At the Fall 1999 Thematic Competition one major thematic grant application was received. After careful consideration by the Adjudication Committee, it was decided not to send the application out for external review.

Spring 2000 Major Thematic Competition

The Spring 2000 competition received two Major Thematic Grant applications, both developed from successful Exploratory Workshop awards, one from 1998 and one from 1999. After assessing both applications the Adjudication Committee decided to move only one of applications forward to the next stage of adjudication. The result of the external reviews will be described in the next Annual Report.

Catalytic Visitor Program

The Catalytic Visitor program brings a distinguished external scholar to UBC who serves as a focal point for gathering a team of UBC faculty and other external scholars to investigate a new research agenda. This program runs for one or two academic terms. The core applicants must commit to working together during the visit and carrying the research forward. The amount of this award is \$50,000-\$75,000. There are two deadlines annually. This year the first award was made to an application submitted at the Fall 1999 thematic competition. The successful application was “Enzymatic Glycosyl Transfer”, whose principal applicants are Stephen Withers, Khorana Professor in Chemistry & Biochemistry, and Antony Warren, Professor Emeritus in Microbiology & Immunology. They proposed bringing **Gideon Davies, Royal Society University Fellow, University of York (UK)** to UBC for most of the 2000 calendar year.

Carbohydrates, in the form of di, oligo and polysaccharides, lipopolysaacharides and a wide variety of other glycoconjugates are ubiquitous in all living organisms. They display a broad spectrum of roles including food storage and utilization, structure and cellular recognition.

Their metabolism is performed by two general classes of enzyme; the glycosyltransferases and the glycoside hydrolases. These two groups of enzymes play essential roles in all aspects of life. Not only are they essential for existence, but there is considerable scope for the exploitation of these enzymes in numerous industrial processes and they are important targets for new therapeutic agents.

The essential bedrock upon which applications of these enzymes may be built is their three-dimensional structure. The 3-D structure of an enzyme governs its chemistry, its suitability as a drug-target and its potential and stability for use in the industrial environment. The “catalytic visitor” of this project, Gideon Davies, is a pioneer in the three-dimensional structure elucidation of these enzymes, both glycoside hydrolases and glycosyltransferases. Dr. Davies’ participation will be the catalyst to bring together research teams at UBC who are working on; 1. detailed analysis of enzymatic mechanism and drug design, 2. the cloning and characterization of these proteins through recombinant DNA technology, and 3.



Gideon Davies, Royal Society
University Fellow, U. of York.
Peter Wall Institute Catalytic Visitor

The conventional wisdom of the Tower of Babel story is that the collapse was a misfortune. That it was the distraction, or the weight of many languages that precipitated the tower's failed architecture. That one monolithic language would have expedited the building, and heaven would have been reached. Whose heaven, she wonders? And what kind? Perhaps the achievement of Paradise was premature, a little hasty if no one could take the time to understand other languages, other views, other narratives period. Had they, the heaven they imagined might have been found at their feet. Complicated, demanding, yes, but a view of heaven as life; not heaven as

synthesis and degradation of cellulose and their applications in the forestry industries. The development of new and exciting techniques to study the mechanism of sugar-metabolising enzymes has been coupled to molecular biological advances in the cloning and expression of recombinant proteins. Site-directed mutagenesis of these proteins, a technique developed at UBC by Nobel Laureate Michael Smith, has been used to characterize these enzymes further and to modify their properties with great success. This project brings together world leaders in glycosyl transfer structure, mechanism, biology and application, allowing a wide-ranging and interdisciplinary program of research.

Other UBC researchers participating in the Enzymatic Glycosyl Transfer project are: Doug Kilburn, Director of the Biotechnology Laboratory; Jack Saddler, Head, Department of Wood Science; Brian Ellis, Department of Plant Science; and Natalie Strydnaka, Department of Biochemistry.

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Exploratory Workshops

Exploratory Workshops provide funding to bring together researchers from different disciplines at UBC with distinguished external experts to work jointly on assessing research possibilities in a new area, and to develop a research agenda. The core team of applicants should be willing to collaborate over an extended period. Typically workshops have a mix of open and closed sessions. Interested members of the UBC community may attend the open sessions. Base Workshop funding is \$15,000 and up to \$10,000 of matching funds are available. Applications are accepted in the spring and fall of each year. It is expected that workshops will have websites on the Internet (linked to the PWIAS website) so that information is easily and readily accessible. Workshops are held at the PWIAS conference rooms in the University Centre, UBC.

At the Fall 1999 thematic competition seven Exploratory Workshop applications were received. The Adjudication Committee selected three of the projects for funding: 1. Correlating Brain Physiological, Metabolic and

Cognitive Functions in Hypoxia; 2. Migration from Asia: China; and 3. Multicultural Sites/Sights. These workshops are described below. Also described in the following section are workshops held this year that were selected at the Spring 1999 competition. The Spring 2000 thematic competition received six Exploratory Workshop applications of which four were awarded grants. These will be described in next year's annual report.

“Acoustic Ecology: Listeners and Their Relationships to Sound Environments”. Principal Investigator Dr. Kathy Pichora-Fuller (Director, Institute for Hearing Accessibility Research, School of Audiology & Speech Sciences, UBC) February 12 – 15, 2000.

Perception researchers study how physical stimuli arising from sources in the environment are processed (physiologically by organisms or computationally by machines) such that particular experiences or behaviours result. Psychoacousticians study hearing by determining how listeners respond to artificially simple stimuli in which specific physical dimensions are manipulated independently; indeed, many stimuli used in these experiments do not occur naturally in the world. In contrast, gestalt psychologists study how listeners respond to intact examples of natural sounds. The latter approach has greater ecological validity, but to date it has not yielded quantitative models. A more productive approach in the study of speech perception has been the analysis-by-synthesis approach in which complex natural sounds have been modified or synthesized to determine which aspects of the sound pattern cue particular responses. The same computational tools that enable us to record and systematically manipulate dimensions of complex stimuli (virtual reality) also enable us to create computational models that are closer approximations of biological systems (neural networks). A new approach will also re-focus research from ‘hearing’ to ‘listening’. This re-focusing reflects the more general shift in cognitive science from modular to integrated views of brain and behaviour.

The workshop comprised three days of open sessions dealing with these four topics: Modelling the environment (physical space models, virtual reality models, hearing aid and assistive listening devices design); Modelling the

The aim of science is to seek the simplest explanation of complex facts. We are apt to fall into the error of thinking that the facts are simple because simplicity is the goal of our quest. The guiding motto in the life of every natural philosopher should be “Seek simplicity and distrust it”.

ALFRED NORTH WHITEHEAD

listener (neuroscience/physiological models, psychoacoustic and speech processing models, and language and pattern perception models); Modelling listening (cognitive science and health models, soundscapes and auditory scenes); and Hearing (hearing loss, machines, and functional listening in realistic conditions).

The final day of the workshop was a closed session to formulate proposals for a new UBC-based research program and facility, and to identify possible collaborations with other research groups.

This workshop accomplished four goals: 1. Formation of research collaborations among UBC researchers and between UBC, national and international researchers; 2. Establishment of ongoing communications, including a website to facilitate sharing of computer models and digitized stimuli as well as research findings and ideas; 3. Development of ideas for a proposal for new research facilities at UBC that would support a new research program in acoustic ecology (specifically, an application for funding from the Canadian Foundation for Innovation); 4. Development of ideas for a proposal for a PWIAS Major Thematic Grant to fund a new research program in acoustic ecology.

Principal external participants in the Acoustic Ecology Workshop were: Jeff Bilmes, Electrical Engineering (U. of Washington); Don Brenneis (Anthropology, USC – Santa Cruz); Michael Byrne (Psychology, Rice U.); Heinrich Bulthoff (Max Planck Institute for Biological Cybernetics, Tubingen); Carl Crandell (Communication Sciences, U. Florida); Pierre Divenyi (Neurophysiology-Biophysics Labs, VA Medical Center and Neuroscience Center, UC Davis); Richard Duda (Electrical Engineering, San Jose State U.); Stuart Gatehouse (MRC Institute for Hearing Research, Glasgow); Kate Gfeller (School of Music and Dept. of Speech Pathology & Audiology, U. of Iowa); Steven Greenberg (International Computer Institute, UC Berkeley); Nina Gronnum (Linguistics, U. of Copenhagen); Klaus Hartung (U. of Connecticut Health Center); Roy Patterson (Centre for the Neural Basis of Hearing, U. of Cambridge); Joseph Stemberger (Communications Disorders Dept., U. of Minnesota); and Dafydd Stephens (Audiology Medicine, U. of Wales).

*The most important thing
in science is not so much to
obtain new facts as to discover
new ways of thinking about
them.*

WILLIAM BRAGG

“Institutional Readings: Early Modern Europe and the Modern University”. Principal Investigators Dr. Nancy Frelick (Dept. of French, Hispanic & Italian Studies, Comparative Literature, UBC), Dr. Paul Yachnin (Dept. of English, UBC). March 9 – 11, 2000.

Sub-titled “Towards a Cultural History of the University”, this workshop brought together researchers from the fields of Theatre, English, History, Education, Comparative Literature, French, Germanic Studies, and Women’s Studies to exchange ideas on how knowledge of the past can contribute fruitfully to present debates within the university and how awareness of the institutional conditions of scholarship could help to improve scholarly practice.

The workshop included UBC and international Renaissance scholars as well as experts on the modern university in order to study the interrelationship between early modern European culture and the institutional culture of the modern academy. The workshop had three main goals: the first was to consider how the environment of the university has influenced scholarly accounts of Renaissance literature, history and society. The second was to investigate the origins of academic culture, with specific emphasis on Renaissance innovations such as the expansion of market relations, the rise of vernacular literatures, the tendency toward disciplinary specialization, the formation of the modern idea of authorship, and the literature of proto-feminism. The third goal was to discuss how we might develop a more complete long historical view of the university, one that would involve study of other historical periods and the other academic areas such as Science, Medicine, and Education. A broad objective of the workshop was to consider how the knowledge of the past could help us make the future university a better place for teaching, learning and doing scholarship.

The program of the workshop included both open and closed sessions on: Issues of Disciplinarity and Gender; the University and Knowledge; Memory, Institution, Archive; Eros, Time, Scholarly Community; Iconography, Technology and Pedagogy: 1500, 1600, 1700, 2000; Seeing Through the Past; University, Disciplinarity, History and A ‘Just Institution’? The Past and Future of the Humanities.



*Nothing is built on stone,
everything on sand,
but our duty is to build
as if stone were sand.*

JORGE LUIS BORGES

*Let the mind be enlarged...
to the grandeur of the
mysteries, and not the
mysteries contracted to the
narrowness of the mind.*

FRANCIS BACON

Principal external participants in the Institutional Readings Workshop were: John Michael Archer (English, U. of New Hampshire); Michael Bristol (English, McGill U.); Constance Jordan (English, Claremont Graduate School); Patricia Parker (English & Comparative Literature, Stanford U.); David Harris Sacks (Reed College); David Simpson (UC Davis); Gary Taylor (Hudson Strode Program in Renaissance Studies, U. of Alabama); Merry Wiesner-Hanks (History and Centre for Women's Studies, U. of Wisconsin); and Carla Zecher (Renaissance Studies, Newberry Library, Chicago).

“Migration from Asia: China” Principal Investigator Dr. Diana Lary (Dept. of History, and Centre of Chinese Research at the Institute of Asian Research, UBC). March 17 - 18, 2000.

A key element of Canada's standing in Asia is as an immigrant destination. For the past decade immigrants from Asia have made up a major proportion of overall migration. These immigrants and the descendants of earlier immigrants maintain close ties with Asia through family connections, trade, business and investment links. These connections in turn help to maintain a high level of concern about political issues, human rights, and cultural and religious issues. Major research has been done on the adaptation of immigrants but much less on the process of migration, the impact of migration on sending societies and on Asian immigration as part of Canada's international relations in Asia.

The issues surrounding immigration to Canada from China are complex and sometimes contradictory. The objective of this workshop was to identify the core issues and connections between apparently distinct aspects of migration through a deeper understanding of the past and present patterns of migration. By taking new perspectives on migration the goal was to fit migration into contexts where it had not played a major role before, such as foreign policy, international security and human rights. The workshop timing was particularly significant considering the recent arrival of ships off the coast of British Columbia and the United States carrying undocumented Chinese migrants.

The workshop brought together participants from Canadian, British, American and Asian universities, from the

Canadian federal government and from non-governmental agencies involved in immigration issues. Discussions and presentations centered on the following topics: the background to migration from China; the bilateral relationship and politics; migration and security issues; human rights; and trade and investment.

As a result of the workshop the following goals were achieved: 1. The development of an inventory of existing research projects and of approaches to research in different disciplines; 2. The generation of a specific research agenda for a future research project and the development of a design for that project; 3. The development of a deeper understanding of the theoretical issues and of the connections between theory and practice; and 4. The establishment of a network of connections between academics, representatives of NGO and community organizations, and public servants.

Principal external participants in the Migration from Asia: China Workshop were: Margaret Beare (Sociology and Director Nathanson Centre for the Study of Organized Crime and Corruption, Osgoode Hall, York U.); Yande Chan (History, Xiamen U.); David Dewitt (Political Science, York U.); James Hathaway (Law, U. of Michigan); and Elisabeth Sinn (Centre for Asian Studies, U. of Hong Kong).

“Correlating Brain Physiological, Metabolic, and Cognitive Functions in Hypoxia”. Principal Investigators Dr. Peter Hochachka (Dept. of Zoology, UBC), Dr. Campbell Clark (Dept. of Psychiatry, UBC). May 12 – 14, 2000.

The brain is perhaps the most oxygen dependent organ/tissue in the human body, yet there is surprisingly little information on the acute effects of a deficiency of oxygen reaching the tissues (hypoxia) on blood flow, on brain metabolism, on cognitive and task specific functions and especially on the relationships between them. The work of this workshop centered on two questions: 1. What is (are) the best method(s) to image the brain during experimentally induced hypoxia? 2. What is the best method for evaluating brain changes during cognitive activation and hypoxia?

The group of UBC and external experts brought together for the workshop represented the disciplines of Radiology, Psychology, Psychiatry, Physics, Zoology, Family





High altitude adaptation:
Quechua women in Peru

Medicine, Biomedical Engineering, and Neurology. The participants achieved the workshop goals of evaluating three specific in-vivo interrogation modalities; functional Magnetic Resonance Imaging, Magnetic Resonance Spectroscopy and Positron Emission Tomography, in terms of their ability to assess brain biochemical and physiological function under normoxia and acute hypoxia.

The workshop participants also focused their discussions on defining the appropriate (safe) levels of induced hypoxia, monitoring the subject condition and determining the length of the hypoxia period. A related issue discussed was determining the physiological measures that best quantify the level of hypoxia. Lastly the workshop participants were asked to consider the question of assessing cognitive function during hypoxia.

The results of the workshop will be used as a framework for further clinical research aimed at preventing and defending against stroke, and to better understand acute rather than chronic hypoxia.

Principal external participants in the Hypoxia Workshop were: Peter Allen (Biomedical Engineering, U. of Alberta); Ravi Menon (MRI Centre, U. of Western Ontario); Henry Holcomb (Radiology, Johns Hopkins U.); Ken Krohn (U. of Washington); Marianne Regard (Neurology, Univ. Hospital, Zurich); Cheryl Grady (Rotman Research Institute, U. of Toronto); and Carlos Monge (Cayetano Heredia U., Peru).

I do not want my house to be walled in on all sides and my windows to be stuffed. I want the cultures of all the lands to be blown about my house as freely as possible. But I refuse to be blown off my feet by any.

MAHATMA GANDHI



“Mediating Cultures: The Foundational Role of the Ramayana in South and Southeast Asian Societies” Principal Investigator Dr. Mandakranta Bose (Director, Centre for India & South Asia Research at the Institute of Asian Research, and Dept. of Religious Studies, UBC). June 19 – 23, 2000.

The Ramayana is an epic concerned with the life and adventures of Ramachandra and his wife Sita. As one of the cornerstones of the social and political life of south and southeast Asia, the Ramayana has influenced public life through centuries both as a verbal and visual artifact. By projecting a coherent ethos and by the magnitude of its temporal and territorial presence, the Ramayana has developed

into a text of cultural hegemony, affecting a wide array of modes of representation, from academic articles to folk art, sculpture, music and theatre; adapting in the industrial age to film, comic books and television. The many versions of the Ramayana provide a rich domain to study cultural transfer, especially where significant departures from the narrative of moral schemes of the central tradition are found.

The purpose of this workshop was to launch broadly based, cross-disciplinary research aimed at understanding the role of the Ramayana in the social and cultural life of south and southeast Asia from earliest times to the present. The workshop's goals were to: identify the broader project's theoretical underpinnings; detail its components and processes; and determine the responsibilities of the project members by establishing a coordinated view of the textual, artistic and social modulations of the Ramayana through time and space.

Researchers in Asian Studies, Religious Studies, Music, Anthropology, Fine Arts, Art History and Sanskrit gave presentations and led discussions focusing on the persistence and adaptability of the Ramayana epic. Topics included: The Ramayana and the Visual Arts of South and Southeast Asia; Ideological Negotiations; Resisting Rama: Ethical and Other Debates in Valmiki's Ramayana; Narrative and Cultural Shifts; Another Ravana, Another Rama: The Narrative Logic of an 'Interpolation'; Gendered Ramayanas: Narrative Strategies; Tradition in the Modern Context; 'Only You: The Wedding of Rama and Sita Past and Present'; Ramayana Textual Traditions in Eastern India: An Overview of Types; Modern Retelling of Ramakatha; Why Javanese Puppeteers Don't Like Ramayana Stories; and Sita's Story Retold: The Great Thai-Khmer spectacle of Visual and Performing Arts.


The program of the workshop included two evenings of performances of classical Indian and Indonesian music and dance hosted by the UBC Museum of Anthropology.

Principal external participants in the Ramayana Workshop were: Robert Goldman (Indian Studies and Sanskrit, UC



Berkeley); Sally Sutherland Goldman (Sanskrit, UC Berkeley); William Smith (Indology, U. of Stockholm); Paula Richman (Humanities, Oberlin College); Philip Lutgendorf (Sanskrit, U. of Iowa); Kapila Vatsyayan (Indira Gandhi National Centre for the Arts, New Delhi); Heidi Pauwels (History, U. of Washington); Laura Sears (History, U. of Washington); and Julie Mehta (Journalist & Independent Scholar, Bangkok).

***“Multicultural Sites/Sights”* Principal Investigator Dr. David Ley (Dept. of Geography, and Director, Metropolis Centre of Excellence, UBC). June 25- 28, 2000.**



Comparative method is a significant research strategy for revealing outcomes in disparate regions, assuming that those regions have sufficient similarities to make comparison credible, and sufficient differences to make it informative. As settler societies, Canada and Australia have similar economic and cultural histories beneath a broader imperial hegemony. Their staple economies engage a classic heartland-hinterland geography, with settlement concentrated in metropolitan cores, a demographic process that has intensified in the current era of globalised post-industrial economies. These metropolitan cores are disproportionately plugged into international flows of capital, information and people. Vancouver and Toronto (Canada), and Sydney and Melbourne (Australia), have become the primary multicultural sites in their respective nations, cosmopolitan locales where the opportunities and strains of multiculturalism are worked out. By the late 1980s non-European new immigrants reached 50% in Australia, and 80% in Canada by the 1990s. Non-European citizens have a heightened visibility, living disproportionately in ethnically-segregated neighborhoods, where their difference is advertised by media coverage and the celebratory tones of official multiculturalism with its tendency to exoticise ethnicity. Together they draw attention to the multicultural sights of the contemporary metropolis.

This workshop, building on a successful precedent in Sydney in 1999, sought to investigate further the new social geography reshaping major cities in Canada and Australia by identifying for discussion nine interrelated themes: 1. Multiculturalism reconsidered. 2. Inter-generational mobility of immigrants: does multiculturalism ensure equality?

3. Immigrant settlement and the transnational metropolis: the need for new concepts and models. 4. New residential sites. 5. Sites of cultural production: practices of un/homeliness. 6. National vs. local cuisines: food and the construction of Canadian and Australian identities. 7. Media representations of cultural difference. 8. Immigrant women's organizations in Sydney and Vancouver. 9. Urban governance, multiculturalism, and citizenship in Sydney and Vancouver.

The long term goal of the Sydney and Vancouver workshops is to prepare the ground work for a major collaborative research initiative.

Principal external researchers at the Multicultural Sites/Sights Workshop were: Ghassan Hage (Anthropology, U. of Sydney); Ian Burley (Geography, U. of New South Wales); Garry Barrett (Economics, U. of New South Wales); Ien Ang (Cultural Studies, U. of Western Sydney); Peter Murphy (Planning, U. New South Wales); William Randolph (Director, New Urban Frontiers Centre, U. of Western Sydney); Susan Thompson (Planning, U. of New South Wales); Elspeth Probyn (Director, Gender Studies, U. of Sydney); Robyn Dowling (Geography, Macquarrie U.); and Kevin Dunn (Geography, U. of New South Wales).



Theme Development Workshops

The program of Theme Development Workshops continued this year with four events held over the course of the year. These workshops allow researchers from a variety of disciplines at UBC to get together on an informal basis to share ideas on researching a particular theme. The Institute provides a meeting venue and light lunch. Applications to this program can be made at any time. This year's workshop were:

Quantitative Research in Genetics and Ethics, January 20, 2000. Coordinated by Michael Burgess, Chair Biomedical Ethics; and Susan Cox, post-doctoral fellow; The Centre for Applied Ethics.

Science for me is very close to art. Scientific discovery is an irrational act. It's an intuition which turns out to be reality at the end of it – and I see no difference between a scientist developing a marvelous discovery and an artist making a painting.

CARLO RUBBIA

Perspectives on Creativity, February 10, 2000. Coordinated by Kate Collie, Institute for Health Promotion Research. This meeting was a follow-up to the Creativity theme development workshop held at the PWIAS in March 1999.

Array Technologies, May 1, 2000. Coordinated by Brett Finlay, Biotechnology Laboratory and Michael Smith, PWIAS Distinguished Professor of Biotechnology.

Perspectives on Creativity II, May 18, 2000. This meeting was part two of the Creativity workshop held in February.

*The difficulty lies, not in
the new ideas, but in escaping
the old ones, which ramify, for
those brought up as most of us
have been, into every corner
of our minds.*

JOHN MAYNARD KEYNES

Weekly Colloquia

These talks are held in the Institute's conference area and are open to the University community. The Institute provides accommodation for the speaker and a luncheon for the host, the speaker, and invited guests. Applications can be made by departments, Faculties or other academic units at any time during the year. This year's speakers were:

Myles Burnyeat, Professor of Philosophy and Fellow of All Soul's College, Oxford. His talk was entitled *Anger and Revenge*, held on October 4. Sponsored by Paul Bartha, Department of Philosophy.

Linda Worrall, Director, Communication Disability in Ageing Research Unit, Department of Speech Pathology and Audiology, U. of Queensland, Australia. She spoke October 25, 1999 on the topic *The new World Health Organization model of impairment, activity, and participation: Modelling the person in a social and physical environment*. Sponsored by Kathy Pichora-Fuller, Director of the Institute for Hearing Accessibility Research (IHEAR).

Kyoung Mann Cho, Professor of Anthropology, Mokpo National University, Korea. Dr Cho spoke December 6 on the subject *Sustainability as a Political and Cultural Artifact: Salmon Fishing and First Nations in BC*. Sponsored by

John Robinson, Director of the Sustainability Development Research Institute.

Peter Abraham, University of Miami, School of Law, gave a talk titled *The Declining Difference Alienage Makes: The U.S. and Germany* on February 25, 2000. Sponsored by John Torpey, Department of Anthropology & Sociology.

John Martin Fischer, Professor of Philosophy, University of California at Riverside, spoke on the topic *Models of Moral Responsibility*, on March 15, 2000. Sponsored by Paul Bartha, Department of Philosophy.

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Peter Wall Distinguished Professors

RAPHAEL AMIT—Dr. Amit was on leave from UBC this year to take up the position of visiting professor at the Wharton School of Economics, University of Pennsylvania. He resigned from UBC and his position at the Institute in June 2000 to stay on at Wharton.

MICHAEL SMITH—Dr. Smith and his secretary, Elvi Eigendorf, moved into their offices at the Institute at the beginning of December 1999. The University of British Columbia announced this year that the new Biotechnology Laboratory would be officially named the Michael Smith Biotechnology Building. Michael continues to serve as Director of the Genome Sequence Centre at the British Columbia Cancer Research Centre, as a Director of the Canadian Foundation for Innovation, and as a member of the Advisory Council on Science and Technology to the Federal Cabinet.

Michael's association with the Institute was the impetus for the PWIAS being a major sponsor of the Gairdner Awards Celebration of Science (see Trustee Initiatives for details), held at UBC in October. Michael was also a co-sponsor of a theme development workshop on array technologies held at the Institute in May.

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Raphael Amit
Peter Wall Distinguished Professor



Michael Smith
Peter Wall Distinguished Professor

UBC Distinguished Scholars in Residence

This program, now in its second year, was developed to bring to the Institute outstanding, tenure-track faculty members with excellent research records. Each Scholar is given a research office and infrastructure budget of \$10,000. The Distinguished Scholars in Residence each give a lecture on their research, and are encouraged to plan a research-related event, such as a lecture series or workshop, during their tenure at the PWIAS. An additional budget of \$5,000 is provided for the Scholars' Institute project.

The residency period is the calendar year. The scholars who were in residence during the July 1-Dec. 21, 1999 period were: Sarah Otto, Zoology; Dolph Schluter, Zoology; Alan Richardson, Philosophy; and Michael Chandler, Psychology. For details see the 1998-1999 Annual Report.

Applications for this program are received June 30 and the residency begins January 1. The Selection Committee chose the 2000 Distinguished Scholars in Residence primarily on the candidates' research attainments and on how well the research matched the Institute's mandate to support work that is both basic and interdisciplinary.



William Hsieh

2000 Distinguished Scholar In Residence

William Hsieh (Earth & Ocean Sciences and Physics & Astronomy) – Dr Hsieh's research is in the area of the inter-annual variability of the climate system - that subtle, nonlinear interplay between ocean, atmosphere and land. In particular, Dr. Hsieh is developing models for climate prediction at the seasonal time scale. Seasonal climate prediction is a new field which has emerged only in the last 12-15 years, with potentially huge economic benefits to society. An example is the famous El Niño phenomenon that can now be forecast with reasonable accuracy 3-12 months in advance. Dr. Hsieh is pioneering the use of artificial neural network models (originally developed in the field of artificial intelligence) for analyzing meteorological/oceanographic data and for short-term climate prediction. During his residency at the PWIAS Dr. Hsieh has been working on a graduate text titled "Neural Networks in the Environmental Sciences" (Cambridge Univ. Press). For his Institute project Dr Hsieh has planned a series

of talks by prominent researchers in the field of Atmosphere and Ocean Modelling (see Appendix B for details).

Patricia Marchak (Sociology) – Dr. Marchak has a number of areas of research interest including: sociology of resource industries, principally forestry and fisheries; state terrorism and ideologies, primarily in the South American context; political economic theory and political ideologies related to social structure; environmental issues and issues of sustainability. Dr. Marchak’s most recent book, “God’s Assassins: State Terrorism in the 1970s in Argentina” (McGill-Queen’s University Press, 1999), has been widely and favourably reviewed. Dr. Marchak’s Institute project is a workshop entitled “Truth, Justice, Accountability and Reconciliation in Societies Emerging from Crimes against Humanity”. The workshop will bring together leading researchers and practitioners in the field to consider the emergence of, and implications of, new models for achieving justice and reconciliation, as in the case of the Truth and Reconciliation Commission in South Africa. Further details on the workshop can be found in Appendix B.



Patricia Marchak

2000 Distinguished Scholar In Residence

Peter Suedfeld (Psychology) – Dr. Suedfeld’s research spans three major areas: 1. Environmental Psychology: adaptations to, coping with, and long-term consequences of extreme environments. Some of the individuals and groups studied (in the field, archival analysis, questionnaire and interview) include polar and space voyagers, political prisoners, holocaust survivors, slaves, and combat soldiers. 2. Cognitive Psychology: high-level decision making and problem solving under stress. One ongoing study is analyzing the speeches and writings of Canadian Prime Ministers to assess cognitive and motivational characteristics related to success in that position. 3. Political Psychology: how people perceive and think about historical/political scenarios e.g., the two World Wars, religious and ethnic conflicts. Dr. Suedfeld’s Institute project is a conference entitled “Psychological and Literary Approaches to the Study of Autobiographical Narrative and Memory”. The workshop will bring together UBC and international experts from the fields of Psychology, Sociology, Literature, Educational Studies, History and English (see Appendix B for details).



Peter Suedfeld

2000 Distinguished Scholar In Residence



John Willinsky

2000 Distinguished Scholar In Residence

John Willinsky (Language & Literacy Education) – Dr. Willinsky’s areas of research are: socio-cultural aspects of language, literacy and literature, anti-racism and post-colonialism, curriculum history and theory, post-structuralist theory, and technology and education. John is the Director of the Public Knowledge Project at UBC. The Public Knowledge Project is dedicated to exploring whether and how new technologies can be used to improve the professional and public value of scholarly research. Details on the Public Knowledge project can be found at <http://www.pkp.ubc.ca> Dr. Willinsky’s recent publications include “If Only We Knew: Increasing the Public Value of Social Science Research” (New York: Routledge, 2000); “Technologies of Knowing: A Proposal for the Human Sciences” (Boston: Beacon, 1999); “Learning to Divide the World: Education at Empire’s End” (Minneapolis, MN: University of Minnesota Press, 1998); and “Empire of Words: The Reign of the OED” (Princeton, NJ: Princeton University Press, 1994). Dr. Willinsky’s Institute project will be a workshop entitled “Knowledge Futures: Alternative Models for Scholarly Publishing”. The workshop will consider methods for improving the quality, organization and accessibility of research knowledge, and explore new roles for the library and academic associations in achieving these goals (see Appendix B for details).

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Visiting Junior Scholars



Visiting Junior Scholars

In July 1999 the Institute held its first Visiting Junior Scholars program. This program brings to UBC for one month, ten outstanding international scholars at the early stages of their careers. Candidates were nominated by UBC academic units and chosen by the Institute Selection Committee based on their research excellence and promise, along with their fit with the Institute’s mandate to support fundamental, interdisciplinary research. The program aims to provide an opportunity for participants to interact with peers from diverse disciplines and for UBC departments to have an opportunity to develop contacts with exceptional new scholars. Each participant is provided with an

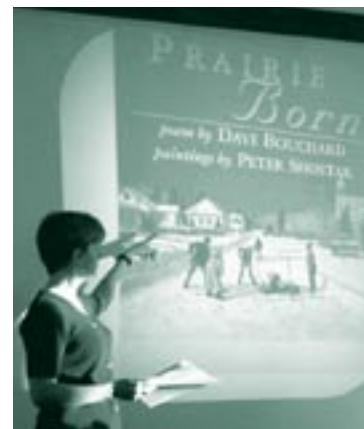
expense allowance of \$5,000, accommodation at the PWIAS and scheduled meals. While the program includes daily talks, lectures and meetings, time is provided for the participants to continue their own research work. The 1999 Visiting Junior Scholars in Residence were:

Hans-Jurgen Bieling – Nominated by the Institute for European Studies at UBC, Leo Bieling received his PhD in Political Science in the spring of 1999 from Philipps-Universität Marburg, Germany. His thesis was titled “The Analysis of the Dynamics of Fragmentation and Exclusion – Discussion of the Competing Approaches”. Leo has an appointment as Assistant Professor at the Institute for Political Science at Philipps-Universität Marburg. Leo’s areas of research interest include political theory, political economy and theories of social development, particularly as they relate to European integration.



1999 Visiting Junior Scholar
Hans-Jurgen Bieling

Alison Calder – Nominated by the Department of English, Alison received her PhD in 1996 from the University of Western Ontario, Canada. Her thesis was titled “The Lie of the Land: Regionalism, Environmental Determinism, and the Criticism of Canadian Prairie Writing”. At the time of her appointment as a Peter Wall Visiting Junior Scholar Alison held a Social Sciences & Humanities Research Council of Canada Post-doctoral fellowship in English at the University of Calgary, Alberta. Alison’s research work can be described as a cultural study of regional identity, in this case the Canadian prairie, and the literature associated with it. This research extends into considerations of material culture, regional history, political theory, and aspects of work being done on spatial configuration by cultural geographers. At the completion of her residency at the PWIAS, Alison received an appointment as Assistant Professor in the Dept. of English at the University of Manitoba.



1999 Visiting Junior Scholar
Alison Calder

Janice Du Mont – Janice received her doctorate in Applied Psychology at the University of Toronto in spring 1999; her dissertation was titled “So Few Convictions: The Role of Victim-Related Characteristics in the Legal Processing of Sexual Assault Cases”. She was nominated to the Visiting Junior Scholars program by the UBC Faculty of Law. Janice is a SSHRC Post-doctoral fellow at the Centre for Research



1999 Visiting Junior Scholar

Janice DuMont

in Women's Health at the University of Toronto and the Sunnybrook & Women's College Health Sciences Centre. Her current research investigates the institutional response to sexual assault in terms of the technologies and practices of forensic evidence collection within the medico-legal context of Ontario. Janice's work explores the processes of evidence and truth construction and the interface between science, technology, sexual assault and the law. Janice's research interests are interdisciplinary, incorporating feminist, social psychological, and criminological theory.



1999 Visiting Junior Scholar

Jeremy Marchant

Jeremy Marchant – Jeremy was awarded his PhD by the Faculty of Clinical Veterinary Medicine of St Catherine's College, University of Cambridge. His dissertation was titled "The Effects of Dry Sow Housing Conditions on Welfare at Farrowing". He is a Senior Research Fellow in the School of Agriculture at De Montfort University, England. Jeremy's nomination to this program came from the UBC Faculty of Agricultural Sciences in conjunction with their new Animal Welfare Program, launched in association with the UBC Centre for Applied Ethics. Jeremy's research interests include the maternal and social behaviour of farm animals and the development of novel methods of welfare assessment, using a multi-disciplinary approach including measures of behaviour, physiology and pathology. His current work is investigating heart rate variability as a means of measuring autonomic function, and assessing its potential application as an indicator of emotional state—a key area of importance in animal welfare research.



1999 Visiting Junior Scholar

Allison May

Allison May – Though her area of study is history, Allison's nomination was through the UBC Faculty of Law. She completed her PhD at the University of Toronto in 1997. Her thesis was titled "The Old Bailey Bar, 1783 – 1834". Allison's work in the field of legal history focuses on lawyers and courts, and the ethics of advocacy. Because the common law method is itself historical, this type of research is central to a proper sociological and historical understanding of the law. Allison's orientation towards 'cultural history' understandings of the legal profession represent a significant advance within the sphere of history of the profession.

Michelle Murphy – Nominated by the UBC Philosophy Department, Michelle currently holds an appointment as a SSHRC/Mellon Post-doctoral Fellow in Women's Studies. In 1998 Michelle received her PhD in the History of Science from Harvard University. Her dissertation was titled "Sick Buildings and Sick Bodies: Materiality, Illness, and Feminism in the Information Workplace". Michelle's areas of research specialization are feminist theory, post-structuralist theory, history of women and gender, history of technology and labour, and 20th century American history of science and medicine. The importance of Michelle's research is in her focus on the transience of diagnostic categories in contemporary biomedicine as well as the material culture that surrounds illness, diagnosis and survival. Her work ties such recently important diagnostic categories as 'sick building syndrome' and 'environmental illness' to the times, places, gender and class of the sufferers. Upon completing her PWIAS residency, Michelle took up a two-year research fellowship at the Max Planck Institute in Berlin.



1999 Visiting Junior Scholar
Michelle Murphy and daughter Mika

Graham Schafer – After starting his academic career in Engineering at Cambridge and working as an engineer for a decade, Graham went to Oxford University where he completed his PhD in Psychology in 1998. Graham's thesis was titled "Word Learning in Infancy". Graham was nominated to this program by the Psychology Department. His research interests lie in the fields of cognitive development, language development and psycho-linguistics. In particular Graham's work seeks to better understand the mechanisms behind and the methods for assessing word learning in early childhood. Graham's research employs a combination of both behavioural studies and computational modelling. Graham is applying neural network models to develop empirical data that test theories of associative learning; theories that stand in sharp contrast to linguistically motivated theories of language acquisition. Graham is a Lecturer in the Department of Psychology at the University of Reading.



1999 Visiting Junior Scholar
Graham Schafer

Oliver Schulte – Oliver was nominated by the Philosophy Department. He received his doctorate in philosophy from Carnegie Mellon University in 1997. His thesis was on "Hard Choices in Scientific Inquiry". Oliver is an Assistant Professor



1999 Visiting Junior Scholar
Oliver Schulte

in the Philosophy Department at the University of Alberta, and has an adjunct appointment in Computer Science. Oliver's research work all falls under the large subject area of learning and adaptation. More specifically, his research areas include: learning theory—finding optimal strategies for given learning problems; game theory—using game theory to define various notions of optimal learning; computational theory—whether natural or artificial, learners have bounded computational capacities; philosophy of science—how can scientific methods be treated as learning strategies in a 'game' with nature; and particle physics—designing an optimal algorithm for learning conservation principles in particle physics.



1999 Visiting Junior Scholar
Frank Symons

Frank Symons – Frank received his PhD in Education and Human Development from Peabody College, Vanderbilt University in 1996. Frank's general area of research concerns the education and health of individuals with intellectual and developmental disabilities. Specific current projects include the study of behavioural and biological mechanisms in self-injurious behaviour in children and adults with severe disabilities, and the study of early development of repetitive movement disorders in young children at risk for developmental delay or disability. Frank is also involved in research on behavioural phenotypes associated with Prader-Willi and Fragile X syndromes, and on the assessment of pain in nonverbal individuals with severe disabilities. Frank is a Research Investigator at the Frank Porter Graham Child Development Center at the University of North Carolina, Chapel Hill. He holds academic appointments in the Faculty of Education and Department of Psychiatry, and a clinical research appointment at the Centre for Development and Learning. Frank's nomination to this program came from the Department of Educational & Counselling Psychology, and Special Education.



1999 Visiting Junior Scholar
Stuart West and daughter Rowan

Stuart West – Nominated by the Zoology Department, Stuart received his PhD in 1996 at Imperial College of Science, Technology and Medicine, Silwood Park, England. His thesis was titled "Reproductive Strategies in Hymenoptera Parasitica". Stuart's field of research is evolutionary biology. His areas of specialization include sex allocation theory, host-plant and host-parasite interactions, and the evolution of sex and

recombination. Much of Stuart's work has focused on parasitoid wasps and fig wasps. His most recent work involves exploiting the facultative sexuality of the parasitic nematode *Strongyloides ratti* to investigate mutational explanations of the evolution of sex. Stuart's work intersects with research work in Botany and Forest Sciences. He has recently been appointed to a BBSRC Post-Doctoral Fellowship at the Institute of Cell, Animal and Population Biology, University of Edinburgh, Scotland.



Talk by Visiting Junior Scholar
Oliver Schulte

As part of their residency each Visiting Junior Scholar gave a talk, open to the University community, on their current research:

Oliver Schulte – “Rationality in Science, Particle Physics and Other Games” July 5

Frank Symons – “Self Injurious Behavior in Children and Adults With Developmental Disabilities” July 6

Michelle Murphy – “The Women’s Health Movement, Speculums and the Promise of a Feminist Science” July 8

Allyson May – “The Bar and the Old Bailey 1750-1850” July 12

Stuart West – “Sex and Applying Evolutionary Theory” July 13

Graham Schafer – “Mechanisms of Early Language Learning” July 14

Janice DuMont – “Researching Sexual Assault” July 15

Hans-Jurgen Bieling – “Social Forces in the Reshaping of Western Europe” July 19

Alison Calder – “Relax, Don’t Do It: Dangers of Regionalism” July 20

Jeremy Marchant – “Pigs in Space: Housing and Welfare of the Sow” July 22

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Early Career UBC Scholars

In the fall of 1999 the Institute introduced the Early Career UBC Scholars program. The success of the Visiting Junior Scholars program was the inspiration for this new program and it is directed at a recognized need to bring together UBC tenure track faculty members from diverse disciplines at the early stages of their careers. This program will welcome its

A good many times I have been present at gatherings of people who, by the standards of the traditional culture, are thought highly educated and who have with considerable gusto been expressing their incredulity at the illiteracy of scientists. Once or twice I have been provoked and have asked the company how many of them could describe the Second Law of Thermodynamics. The response was cold: it was also negative. Yet I was asking something which is about the scientific equivalent of: Have you read a work of

first cohorts of Associate and Assistant professors beginning in September 2000. For the participants, the goals of this program are to: 1. expose participants to research from across the University; 2. allow for interaction with excellent peers across a wide variety of disciplines; 3. explore the connections of one's own research with research that one would not ordinarily encounter; 4. learn about the research infrastructure at UBC; and 5. provide special recognition and a modest stipend to support research. For the University and the Institute, the goals are to: 1. help promote interdisciplinary research; 2. encourage an identification with the University as a whole; 3. provide awareness of the activities of the Institute; and 4. contribute to the overall research accomplishments at UBC. Applications to the program were invited this January and selection made in April. The 2000 Early Career UBC Scholars are listed below; details on the participants and the program will be included in the next annual report.

Associate Professors

Barbara Arneil, Political Science; Michael Bostock, Earth & Ocean Sciences; Mark Schaller, Psychology; Elizabeth Simpson, Medical Genetics; John Torpey, Sociology, and Institute for European Studies; and Stephen Ward, Journalism.

Assistant Professors

Lyren Chiu, Nursing; Cristina Conati, Computer Science; Michael Dobeli, Mathematics and Zoology; James Dunn, Geography; Kadriye Ercikan, Educational & Counselling Psychology, & Special Education; Sidney Fels, Electrical & Computing Engineering; Bryan Gick, Linguistics; François Jean, Microbiology; Patrick Keeling, Botany; and Alan Kingstone, Psychology.

• • •

Trustees Initiatives

Institute Trustees can propose funding worthy research-related activities or events that do not fit the criteria of the Institute's thematic or residential programs. The academic integrity of the proposals is assessed by the director and the endowed professors.

This year one such proposal, a UBC-based hosting of the Gairdner Award winners, was made and supported.

Gairdner Foundation - The Gairdner Foundation is a non-profit corporation devoted to the recognition of outstanding achievement in biomedical research worldwide. The purpose of these awards is the recognition of individuals whose work or contribution constitutes tangible achievement in the field of medical science. The Foundation has presented 240 International Gairdner Awards representing a wide variety of specialties and disciplines, and 9 Wightman awards which are presented from time to time to outstanding Canadians who have made an exceptional contribution to Canadian medicine. Of the International Awardees, 56 individuals have gone on to win a Nobel Prize in either Medicine and Physiology or Chemistry, including Michael Smith, Peter Wall Professor of Biotechnology, 1993 Nobel Prize in Chemistry.

In October 1999, the Gairdner Foundation, in celebration of its 40th anniversary, held a Celebration of Science at The University of British Columbia. The celebration brought together seven Gairdner awardees, including two Nobel laureates, to give public talks on their current research. The Peter Wall Institute was pleased to be a major sponsor of this event. (A list of the Gairdner Foundation “Celebration of Science” speakers and their talks can be found in Appendix B.)

- - -

Associates Gatherings

Associates of the Peter Wall Institute are those faculty members who have served on one of the Institute’s committees, have been or are currently a PI on one of the Institute’s thematic awards, or are individuals who have been selected for one of the three residential programs (see page 44 for a list of all Institute Associates). On two Wednesdays each month the Institute offers alternating lunches and dinners with a following lecture. All associates are invited to attend and a fee is charged to partially cover the meal costs. This program provides a forum for UBC faculty to exchange ideas and knowledge across different departments and Faculties. The speakers include



Gairdner Awardees Luncheon
Peter Wall Institute

*I was moving among two
groups . . . who had almost
ceased to communicate at all,
who in intellectual, moral,
and psychological climate had
so little in common that . . .
one might have crossed
the ocean.*

C. P. SNOW

the PIs of recently awarded Major Thematic and Exploratory Workshop grants previewing their projects, and participants in the Early Career UBC Scholars, the Distinguished Scholars in Residence program, and selected other Associates.

Associates Events

- July 7 Dinner, Alan Richardson, “Nietzsche and the Philosophy of Science”
- July 21 Dinner, Sally Otto, “What Limits the Rate of Evolution?”
- Sep. 15 Dinner, Michael Chandler, “The Persistence of Identity in the Face of Radical Personal and Cultural Change: A Comparison of the Self-continuity Warranting Practices of First Nations and Culturally Mainstream Youth”
- Oct. 6 Dinner, Valerie Raoul, Report on the Major Thematic Grant “Narratives of Disease, Disability and Trauma”
- Oct. 20 Lunch, Stephen Sheppard, “Linking Sustainability and Aesthetics: Dilemmas in Forest Ecology and the Public Presentation of Resource Management”
- Nov. 3 Dinner, Dolph Schluter, “Ecology and the Origin of Species”
- Nov. 17 Lunch, Anne Condon, “DNA Computing”
- Dec. 1 Dinner, Chris Brion, Report on the Major Thematic Grant “Electron Motion in Matter”
- Jan. 12 Lunch, Rhodri Windsor-Liscombe, “Fabricating Images of Empire: From the British Empire Exhibition to the Festival of Britain”
- Jan. 26 Dinner, Ann Rose, Report on the Major Thematic Grant “Pathogenomics”
- Feb. 9 Lunch, Kathy Pichora-Fuller, Preview of the Exploratory Workshop “Acoustic Ecology”
- Feb. 23 Dinner, Paul Yachnin, Preview of the Exploratory Workshop “Institutional Readings”
- Mar. 15 Lunch, Diana Lary, Preview of the Exploratory Workshop: “Migration from Asia: China”
- Mar. 22 Dinner, Peter Hochachka & Campbell Clark, Preview of the Exploratory Workshop “Correlating Brain Physiological, Metabolic and Cognitive Functions in Hypoxia”
- Apr. 12 Lunch, Barbara McGillivray, “Predictive Testing in Genetic Breast Cancer: Implications for Families”
- Apr. 26 Dinner, Peter Suedfeld, “Invictus and Positive Psychology”
- May 10 Lunch, David Ley, Preview of the Exploratory Workshop “Multicultural Sites/Sights”
- May 24 Dinner, Mandakranta Bose, Preview of the Exploratory Workshop “Mediating Cultures: The Foundational Role of the Ramayana in South and Southeast Asian Societies”
- June 14 Dinner, John Willinsky, “Public Knowledge, Democracy and the University”



Associates gathering



Associates gathering



PWIAS Facilities

Administration

The Institute offices are in the east wing, third floor of the University Centre. In addition to the Director and staff offices, the facilities provide four research offices for the Peter Wall Distinguished Scholars in Residence, and an office for Peter Wall Distinguished Professor Michael Smith. The administration area also has a boardroom and a lounge for the use of Scholars in Residence.

Conferences

The Institute has two conference rooms in the west wing of the University Centre's third floor. The large and small meeting rooms, approximately 800 and 600 sq. ft. respectively, can be used separately or combined. The rooms both open onto a large terrace with a sweeping view of the sea and mountains. When not in use by the Institute for program events, the conference rooms are available to other groups. Priority in booking the Institute facilities is given to research related activities open to the University community.

Residences

Located at the northeast end of the University Centre is the Institute's guest residence of twelve rooms. These superior rooms are well furnished and offer a view to the ocean and mountains. Each room, whether the standard hotel style or the kitchenette style, includes a full private bathroom, queen bed, internet linked PC, cable TV and voice mail. The rooms can be configured individually or as two room suites. Preferential rates are given to Institute program guests. When not in use by the Institute, the rooms are available for visitors to the University.

Management of the rental of the Institute facilities, including inquiries, taking bookings, invoicing, etc. was initially done by Institute staff. In September 1999 an agreement was reached with Sage Restaurant and Catering Services, co-tenant of the University Centre, for Sage to handle all matters related to the rental of Institute facilities. This arrangement was terminated in December 1999 when it did not meet Institute expectations

FACILITIES & RESOURCES





for marketing, reporting, accountability, and service to the UBC community. As of January 1, 2000 Institute staff once again managed all aspects of the rental of our facilities.

Since January the Institute has experienced a steady increase in demand for guest rooms and meeting space. The revenue from these rentals offsets a portion of the operating costs of the facilities, including the substantial lease the Institute pays to the University.



Website

The Institute's website, at www.pwias.ubc.ca, has been online since December 1996. This year the website has been completely redesigned to improve the look of the site and its navigability. The website has expanded program descriptions and more details on all the Institute's awards and appointments, current and past. Our website now has links to the websites of our thematic projects and it includes a downloadable version of the thematic programs application form.



FINANCIAL SUMMARY

FUNDING FOR THE INSTITUTE COMES FROM TWO ENDOWMENTS. THE PETER WALL ENDOWMENT COMPRISES PETER WALL'S ORIGINAL GIFT OF 6.5 MILLION WALL FINANCIAL CORPORATION SHARES. THE DIVIDENDS FROM THESE SHARES SUPPORT the Residential Programs and a major portion of the Institute administration. The Hampton Endowment, a \$10 million fund dedicated to the Institute in 1994, supports the Thematic Programs. The Hampton Endowment is currently (June 2000) valued at approximately \$12 million.

For 1999-00 the principal program expenditures were:

Thematic Programs

- \$417,000 in support of three Major Thematic projects: Electron Motion in Matter; Pathogenomics; and Narratives of Disease, Disability and Trauma.
- \$108,000 for six Exploratory Workshops.
- \$50,000 to support one Catalytic Visitor.
- \$36,000 for Theme Development Workshops, Weekly Colloquia and PWIAS Associates Forums.

Residential Programs

- \$58,000 for the four Distinguished Scholars in residence.
- \$85,000 for the Visiting Junior Scholars program.

Other Programs

- \$300,000 for the Endowed Professorships.
- \$19,000 for the Trustee Initiative.

In January 1999, the Institute entered into an agreement with the University of British Columbia to lease the University Centre facilities at an annual rate of \$210,000 for a five-year term. Income from the rental of the Institute guest rooms and meeting rooms was \$103,000 this year. All rental revenues are applied against the operating costs of the facilities.



Peter Wall

PEOPLE

PWIAS Staff

Kenneth R. MacCrimmon was appointed in 1996 as the first Director of the Peter Wall Institute for Advanced Studies. He also holds the endowed chair as E.D. MacPhee Professor of Management at UBC. His PhD is from UCLA in interdisciplinary studies. Early in his career he was on the faculty of Carnegie Mellon University as well as holding an extended appointment at the Rand thinktank. Later he was J.L. Kellogg Distinguished Professor of Strategy and Decision at Northwestern University. He is co-author of the book Taking Risks, and his current research focuses on descriptive and normative aspects of decision theory and creativity.

Christopher McGill is Assistant to the Director. Chris was appointed in May 1999. He obtained his BA (Hons.) from Trent University and a BEd from St. Mary's University. Chris is responsible for the day-to-day operations of the facilities and program administration.



Peter Wall Institute office personnel
(left to right): Chris McGill, Dale
MacCrostie, Katie Eliot

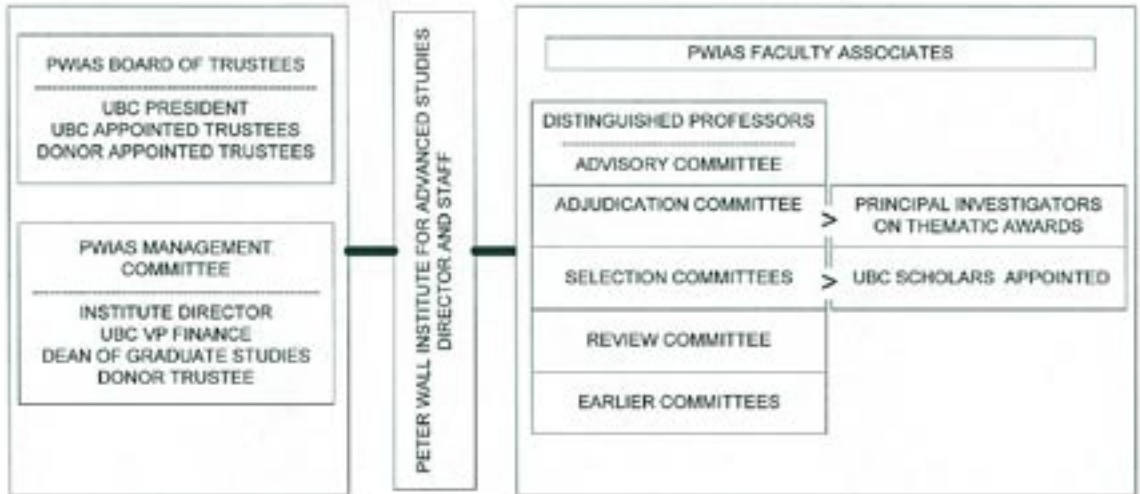
Dale MacCrostie is the Institute's Systems Coordinator. She manages all information systems hardware and software including the requirements for the Distinguished Scholars in Residence, the administrative offices, the residential annex and the website.

Katie Eliot is the Institute secretary, having joined the Institute in March of this year. Katie has a BA in Geography from UBC. She has considerable experience working at the University including IT Services and the Institute for Asian Research. In addition to her program support responsibilities, Katie looks after all aspects of the booking of Institute facilities.



Governance

The diagram below illustrates the academic and administrative responsibilities and links within the Peter Wall Institute for Advanced Studies.



Board of Trustees

There are five trustees on the Peter Wall Institute board.

They are:

- Akbar Lalani, Royal Columbian Hospital
- Robert H. Lee, Prospero International Realty Inc.
- Les Peterson, Boughton Peterson Yang Anderson
- Martha Piper (Chair), President, UBC
- Bruno Wall, Wall Financial Corporation

Management Committee

Four members oversee the financial operations of the Institute.

They are:

- Frieda Granot, Graduate Studies, UBC
- Ken MacCrimmon, Peter Wall Institute for Advanced Studies, UBC
- Terry Sumner, Finance and Administration, UBC
- Bruno Wall, Wall Financial Corporation



Faculty Associates

Associates of the Institute are those UBC faculty members who are or have been a PI on an Institute competitive award, have been selected as a Distinguished Professor, Scholar in Residence, or Early Career Scholar, or who have served on one of the Institute's committees.

Agricultural Science

Les Lavkulich, Soil Science
 Moura Quayle, Landscape Architecture
 Stephan Sheppard, Landscape Architecture
 James Thompson, Agricultural Science
 Hennie van Vuuren, Food Biotechnology

Applied Science

Joel Bert, Chemical Engineering
 Sheldon Cherry, Civil Engineering
 John Grace, Chemical Engineering
 Martha Salcudean, Mechanical Engineering
 Tim Salcudean, Electrical & Computer Engineering

Arts

Bill Benjamin, Music
 Maxwell Cameron, Political Science
 Alan Cairns, Political Science
 Michael Chandler, Psychology
 Jane Coop, Music
 Luciana Duranti, Library, Archival & Information
 Studies
 Richard Ericson, Anthropology & Sociology and
 Principal, Green College
 Nancy Frelick, Hispanic & Italian Studies and
 Comparative Literature
 Marketa Goetz-Stankiewicz, Germanic Studies
 Derek Gregory, Geography
 Sneja Gunew, English
 Robert Jackson, Political Science
 Brian Job, Political Science
 Eva-Marie Kroller, English
 Diana Lary, History

David Ley, Geography
Patricia Marchak, Anthropology & Sociology
Mohan Matthen, Head, Philosophy
Ralph Matthews, Anthropology & Sociology
Dianne Newell, History
Anthony Phillips, Psychology
Ruth Phillips, Museum of Anthropology
Catharine Rankin, Psychology
Valerie Raoul, French and Centre for Women's
Studies & Gender Relations
Alan Richardson, Philosophy
Laurie Ricou, English
Steven Savitt, Philosophy
Robert Silverman, Music
Olav Slaymaker, Geography
Peter Suedfeld, Psychology
Mark Vessey, English
Janet Werker, Psychology
Rhodri Windsor-Liscombe, Fine Arts
Jonathan Wisenthal, English
Paul Yachnin, English

Commerce

Raphael Amit, Strategy & Business Economics*
Dale Griffin, Marketing
Alan Kraus, Finance
Maurice Levi, Finance
Ken MacCrimmon
Ilan Vertinsky, Strategy & Business Economics

Dentistry

Don Brunette, MACD
David Sweet, OBMS

Education

Patricia Arlin, Educational Psychology *
Linda Siegel, Education & Counselling Psychology
and Special Education
Patricia Vertinsky, Educational Studies
John Willinsky, Language and Literary Education

Graduate Studies

Frieda Granot, Dean
Mandakranta Bose, Institute of Asian Research
Lawrence Green, Health Services and Policy Research *
Kathy Pichora-Fuller, Institute for Hearing
Accessibility Research

Law

Christine Boyle
Jutta Brunee
Wes Pue
Joseph Smith

Medicine

Patricia Baird, Medical Genetics
William Bowie, Infectious Diseases
Don Brooks, Pathology
Carolyn Brown, Medical Genetics
Campbell Clark, Psychiatry
Dana Devine, Pathology
Judith Hall, Pediatrics
Michael Hayden, Medical Genetics
Clyde Hertzman, Health Care & Epidemiology
James Hogg, Pathology
Dagmar Kalousek, Pathology
Barbara McGillivray, Medical Genetics
Peter Reiner, Psychiatry
Wendy Robinson, Medical Genetics
Ann Rose, Medical Genetics
David Speert, Pediatrics
Mary Stephenson, Obstetrics & Gynaecology

Pharmaceutical Sciences

Gail Bellward
John McNeill

Science

Ian Affleck, Physics & Astronomy
Michael Blades, Chemistry
Chris Brion, Chemistry
Campbell Clark, Psychiatry

Anne Condon, Computer Science
David Dolphin, Chemistry
Brett Finlay, Biotechnology
Priscilla Greenwood, Mathematics
Michael Healey, Earth & Ocean Sciences
Nancy Heckman, Statistics
Peter Hochachka, Zoology
Grant Ingram, Earth & Ocean Sciences
William Hsieh, Earth & Ocean Sciences
Brian James, Chemistry
David Kirkpatrick, Computer Science
Charles Krebs, Zoology
George Mackie, Biochemistry
Grant Mauk, Biochemistry
Andrew Ng, Physics & Astronomy
Sally Otto, Zoology
Tony Pitcher, Fisheries Centre
Rosemary Redfield, Zoology
Dolph Schluter, Zoology
Anthony Sinclair, Zoology
Michael Smith, Biotechnology
Terrance Snutch, Biotechnology
Curtis Suttle, Earth & Ocean Sciences
William Unruh, Physics & Astronomy
Antony Warren, Microbiology
Stephen Withers, Chemistry
James Zidek, Statistics

Note: * denotes Associates no longer at UBC.

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Committees

Adjudication Committee

This committee is charged with evaluating thematic grant proposals.

William Benjamin, Music
Joel Bert, Chemical Engineering
Don Brooks, Pathology

Christine Boyle, Law
Anne Condon, Computer Science
Luciana Duranti, Library, Archival &
Information Studies
Dale Griffin, Commerce & Business Administration
George Mackie, Biochemistry
Mohan Matthen, Philosophy
Ken MacCrimmon, Peter Wall Institute
for Advanced Studies (Chair)
Barbara McGillivray, Medical Genetics
John McNeill, Pharmaceutical Sciences
Rosemary Redfield, Zoology
Peter Reiner, Psychiatry
Jack Saddler, Wood Science
Linda Siegel, Education & Counselling Psychology,
and Special Education
James Thompson, Agricultural Sciences
Janet Werker, Psychology
John Willinsky, Language & Literacy Education
Jonathan Wisenthal, English

Review Committee

This committee reviews past awards in the thematic competitions.

Gail Bellward, Pharmaceutical Sciences (Chair)
William Bowie, Infectious Diseases
Don Brunette, Dentistry
Derek Gregory, Geography
Alan Kraus, Commerce & Business Administration
Ken MacCrimmon, Peter Wall Institute
for Advanced Studies
Andrew Ng, Physics & Astronomy
Wes Pue, Law
Catharine Rankin, Psychology
Curtis Suttle, Earth & Ocean Sciences
Rhodri Windsor-Liscombe, Fine Arts

Selection Committee

Charged with evaluating applications for senior scholar appointments (formerly the Appraisal Committee).

Priscilla Greenwood, Mathematics
David Kirkpatrick, Computer Science
Ken MacCrimmon, Peter Wall Institute
for Advanced Studies (Chair)
Patricia Vertinsky, Educational Studies
Mark Vessey, English

Selection Committee

Responsible for evaluating applications for visiting junior and early career scholar appointments.

Jutta Brunee, Law
Dana Devine, Pathology
Brett Finlay, Biotechnology
Nancy Heckman, Statistics
Grant Ingram, Earth & Ocean Sciences
Ken MacCrimmon, Peter Wall Institute
for Advanced Studies (Chair)
Dianne Newell, History
Laurie Ricou, English
Tim Salcudean, Electrical & Computer Engineering
Hennie van Vuuren, Food Biotechnology
Ilan Vertinsky, Commerce & Business Administration

Advisory Committee

This committee meets as required to discuss directions for PWIAS and recommend program changes.

Raphael Amit, Commerce & Business Administration
Patricia Baird, Medical Genetics
Jane Coop, Music
Richard Ericson, Law and Anthropology & Sociology
Peter Hochachka, Zoology
David Kirkpatrick, Computer Science
Anthony Phillips, Psychology
Martha Salcudean, Mechanical Engineering
Michael Smith, Biochemistry (Chair)
William Unruh, Physics & Astronomy
Patricia Vertinsky, Educational Studies



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Peter Wall Institute for Advanced Studies

Understanding Electron Motion in Matter: Orbital Imaging of Biomolecules,
Transition Metal Complexes, Chemically Reactive Species and Condensed Matter

Second Annual Workshop and Symposium,
Friday, October 1, 1999, PWIAS Conference Room,
The University Centre, UBC.

Program

- 8.30-8.45am Prof. Chris E. Brion (Chemistry, UBC) and Dr. Ken MacCrimmon (Director, PWIAS):
Introduction and Welcome.
- Session 1 EMS Studies of Condensed Matter and Distorted Wave Theory.**
- 8.45-9.45am Prof. K. Tong Leung (Chemistry and Physics, U. Waterloo): "Applications of Electron Scattering
for Materials Science — Perspectives for EMS".
- 9.45-10.15am Prof. Keith Mitchell (Chemistry/AMPEL, UBC): "Challenges in Surface Structure".
- 10.15-10.45am Dr. Sebastian Tixier (Chemistry/Physics/AMPEL, UBC): "Reflection EELS/EMS Studies of
Surfaces".
- 10.45-11.00am Coffee / Tea / Juice.
- 11.00-11.30am Prof. Tom Tiedje (Physics/AMPEL, UBC): "The Preparation of Stepped Targets and Ultra-
smooth Surfaces by Molecular Beam Epitaxy for Surface EELS/EMS Studies".
- 11.30-12.30pm Prof. Ian McCarthy (Atomic Physics, Flinders Univ. of South Australia): "The Distorted Wave
Impulse Approximation for EMS Studies of Atoms, Molecules and Condensed Matter".
- 12.30-1.45pm Lunch
- Session 2 EMS and Computational Studies of Biomolecules, Transition Metal Complexes
and Chemically Reactive Species.**
- 1.45-2.15pm Dr. Warwick Shapley (Theoretical Chemistry, UBC): "Density Functional Theory and EMS —
Present Status and New Perspectives".
- 2.15-2.30pm Prof. Chris E. Brion (Chemistry, UBC): "Distorted Wave Effects in EMS Studies of Free
Molecules".
- 2.30-2.45pm Dr. Glyn Cooper (Chemistry, UBC): "Experimental and Theoretical Studies of the Frontier
Orbitals of $\text{Re}_2(\text{CO})_{10}$ ".
- 2.45-3.00pm Dr. Renfei Feng (Chemistry, UBC): "EMS and Computational Studies of SO_2 and ortho-Xylene".
- 3.00-3.30pm Prof. Steve Withers (Chemistry/Biochemistry, UBC): "Important Functional Groups and Their
Roles in Biochemistry, Medicine and Pharmacy".
- 3.30-3.45pm Coffee / Tea / Juice.
- 3.45-4.15pm Dr. Igor Litvinyuk (UBC): "EMS Studies of Molecules of Biochemical, Medical and
Pharmaceutical Interest — Adamantane, Amantadene, Utopine, Ureas and Furan".


- 4.15-4.45 Prof. Chris Brion, Dr. Sebastian Tixier and Dr. Warwick Shapley (Chemistry, UBC), Prof. Saul Wolfe and Dr. Zheng Shi (Chemistry, SFU): "Investigation of the LMO (VB), CMO and KSO Orbital Models in EMS and Computational Studies of C₂H₄, C₂H₂ and Pyridine — Is there Evidence for Bent Banana Bonds?"
- 4.45-5.15pm Prof. Don Douglas and Dr. Samir Al Moussalami (Analytical Chemistry, UBC): "The ICP Ion Source — Performance and Suitability for EMS and Collisions Experiments".
- 5.15-5.45pm Drs. Glyn Cooper and Yenyong Zheng (Chemistry, UBC): "The Energy and Angle Dispersive Multi-Channel EMS Instrument for Rapid Orbital Imaging".
- 5.45pm Prof. Chris E. Brion (Chemistry, UBC):
Concluding remarks.

All interested are invited to attend (no registration fee required).

Crisis Points and Models of Decision

Complexity Group Seminars July 1999 - June 2000:

- September 8 Frank Moss, Center for Neurodynamics, University of Missouri at St Louis.
“Synchronization in the Paddlefish Electroreceptor System”
- September 13 Frank Moss, Center for Neurodynamics, University of Missouri at St Louis.
“Counting and Scaling - Unstable Periodic Orbits in Physics and Bio-systems”
- September 20 Frank Moss, Center for Neurodynamics, University of Missouri at St Louis.
“Visual perception of stochastic resonance”
- September 27 Philip Stamp, Physics & Astronomy, UBC. “Spin Glasses”
- October 21 Boris Spivak, Physics, U. of Washington.
“Propagation of Waves in Non-linear Disordered Media”
- October 25 William Hsieh, Earth & Ocean Sciences, UBC.
“Nonlinear canonical correlation analysis by neural networks”
- November 1 Alex Zagoskin, Physics & Astronomy, UBC. “Superconducting mesoscopic qubits”
- November 8 Suresh Pillai, Microbiology, Texas A&M.
“Probabilistic Roadmaps for Path Planning in Robotic Systems”
- November 15 Kan Chen, Computational Science, National University of Singapore.
“A general learning algorithm for solving optimization problems”
- November 22 Peter Danielson, Applied Ethics, UBC. “Two Evolutionary Models of ‘Irrationality’”
- January 10 Rinaldo B. Schinazi, Mathematics, U. of Colorado. “On the spread of drug resistant diseases”
- January 24 Cindy Greenwood, Mathematics, UBC. Moderator,
“Discussion on Modelling and Methods on the Basis of the Crisis Points Experience”
- February 18 Adlai Fisher, Commerce & Business Administration, UBC. “Forecasting Multifractal Volatility”
- March 6 Wolfgang Wefelmeyer, Mathematics, Universit Siegen; Lawrence Ward, Psychology UBC; and
Cindy Greenwood, Mathematics UBC. “Overview of Results and Insights”
- March 20 Report of the Stochastic Atmospheric Dynamics (SAD) sub-group
“Fluctuations in the Atmosphere”. Speakers include Adam Monahan (“Localisation of Rossby
Waves by Fluctuations in the Background Wind”); Chris Jeffery (“Effect of condensation/
evaporation and particle inertia on the viscous-convective subrange”) and Greg Lewis (“Satellite
measurements of layer-cloud spatial variability”)
- May 29 Frank Moss, Center for Neurodynamics, University of Missouri at St Louis.
“Stochastic Resonance and Stochastic Synchronization in the Paddlefish”

	<p>Peter Wall Institute for Advanced Studies</p>
<p>Truth, Justice, Accountability and Reconciliation in Societies Emerging from Crimes Against Humanity</p>	
<p>PWIAS Distinguished Scholar in Residence Workshop Series arranged by Prof. Patricia Marchak</p>	<p>October 13 - 14, 2000 Peter Wall Institute University Centre, Rm. 307 to register (free) call 822-0198</p>
<p><u>Discussion Leaders & Presenters Include</u></p>	
<p>Heribert Adam, Political Science , SFU & Kogila Adam-Moodley, Sociology, UBC <i>“The Opening of the Apartheid Mind”</i></p>	
<p>Priscilla Hayner, advisor to the Ford Foundation author of <i>“Unspeakable Truths”</i></p>	
<p>Susan Dwyer, Philosophy, University of Maryland <i>“Reconciliation for Realists”</i></p>	
<p>Peter Burns, Q.C., Faculty of Law, UBC Chair, United Nations Convention on Torture</p>	
<p>Maurice Copithorne, Q.C., Faculty of Law, UBC U.N. Special Representative on Human Rights in Iran</p>	
<p>Mark Osiel, College of Law, University of Iowa, author <i>“Mass Atrocity, Collective Memory & the Law”</i></p>	
<p>Peter Railton, Philosophy, University of Michigan co-author <i>“Moral Discourse and Practice”</i></p>	
<p>Visit the Wall Institute website at www.pwias.ubc.ca for a full workshop guide Support provided by UBC Philosophy Dept., Faculty of Law, Faculty of Arts.</p>	



**Peter Wall Institute
for Advanced Studies**

ATMOSPHERE AND OCEAN MODELLING

PWIAS Distinguished
Scholar in Residence
Workshop Series
arranged by
Professor William Hsieh



'What Can We Learn From Paleoclimate Models?'

Professor Lawrence Mysak, Dept. of Atmospheric and Oceanic Sciences,
McGill University. Tuesday, July 25, 3:30 pm.

'Exposing the Sunda Shelf: Climatic Consequences of Eustatic Sea Level Changes'

Dr. Andrew Bush, Dept. of Earth & Atmospheric Sciences, Univ. of Alberta
Thursday, September 7, 3:30 pm.

'Extremes in climates simulated by atmospheric and coupled general circulation models'

Dr. Francis Zwiers, Canadian Centre for Climate Modeling
and Analysis, Victoria, BC. Thursday, September 21, 3:30 pm.

'Spectral element methods for general circulation models'

Dr. Steve Thomas, National Centre for Atmospheric
Research, Boulder, CO. Wednesday, September 27, 3:30 pm.

'Geophysical Turbulence in the 'Real' World: How is the observed mesoscale energy spectrum maintained?'

Dr. Kevin Hamilton, Geophysical Fluid Dynamics Laboratory,
Princeton, NJ. TBA, Check www.pwias.ubc.ca for date and time.

All talks Room 307 Peter Wall Institute, University Centre
University of British Columbia

**Peter Wall Institute for Advanced Studies
University Centre, 6331 Crescent Road, UBC**

5:00-8:00 pm

**Knowledge Futures: Alternative Models for Scholarly
Publishing, Thursday November 2, 2000**

Distinguished Scholar-in Residence Workshop
Peter Wall Institute for Advanced Studies
University Centre, 6331 Crescent Road, UBC

*Open to all, with a special invitation to those involved in journal editing,
editorial boards, and the executive of academic associations.*

Dinner is served.

Participants will

- review the Rosenzweig and Willinsky models, as two responses to improve the quality, organization, and accessibility of research knowledge
- explore new roles for the library and academic associations in achieving those goals
- develop a broad agenda for researching and assessing how this knowledge is managed (distributed, indexed, archived), reviewed, financed, and utilized in both academic and non-academic settings.

John Willinsky, UBC, Leader with
Keith Fuller, UBC
Donald Gutstein, Simon Fraser University
Sam Ladner, Simon Fraser University
Machel Rosenzweig, University of Arizona
Larry Wolfson, UBC

Psychological and Literary Approaches to the Study of Autobiographical Narrative and Memory

Jointly Sponsored by Peter Wall Institute for Advanced Studies, University
of British Columbia and Mershon Center, Ohio State University

PROGRAM

SUNDAY, MAY 6

9:30-10:00 AM

Welcome and Introductions

10:00 AM -12:00 noon

**Session 1: The Measurement and Analysis
of Autobiographical Memory**

Chair: Richard Tees, University of British Columbia

Eric Eich, University of British Columbia:

"Affect and Autobiographical Memory"

James J. Ponzetti, University of British Columbia:

*"Qualitative and Quantitative Methods in
Studying Relationship Narratives"*

Peter Suedfeld, University of British Columbia:

*"Quantitative Thematic Content Analyses of
Autobiographical Narratives"*

Brian de Vries, State University of California at

**San Francisco: "Life Lines and Life Stories:
Representations of Structure, Time, and Context"**

LUNCH 12:30-2:00

**Lunch Speaker: Prof. A.G. Phillips, Departments
of Psychology and Psychiatry, University
of British Columbia: "(Working) Memories
Are Made Of This"**

2:00-4:30 PM

**Session 2: Memory and the
(Re)Construction of Identity**

Chair: R. Ned Lebow, Ohio State University

R. Ned Lebow, Ohio State University:

*"Memory and Identity: World War II and the
Postwar Politics of Identity Construction"*

Claudio Fogu, University of Southern California:

"Deja Vu and the End of History"

Michael Ross, University of Waterloo:

"Remembering and Constructing the Self"

Amy Shuman, Ohio State University:

*"Memory, Style, and the Reconstruction of
Identity in Conversion Stories"*

Patricia Vertinsky, University of British Columbia:

*"Memories of Madness: Gender, Physical
Culture and Autobiography"*

4:30-5:00PM

DISCUSSION

MONDAY, MAY 7

10:00-11:30AM

Session 3: Autobiography and Fiction

Chair: Sherrill Grace, University of British Columbia

Gabriele Helms, University of British Columbia:

*"Autobiographical Memory and the Question
of Genre"*

Dorothy Noyes, Ohio State University:

*"In the Blood: Memory, Rhythm, and the
Franco Regime in Catalan Nationalist
Performance"*

Julia Watson, Ohio State University:

*"Versions of Memory: Charlotte Salomon's
Interrogation of Life or Theater?"*

11:30 -12:00PM

CLOSING DISCUSSION

1999 CELEBRATION OF SCIENCE SCHEDULE OF EVENTS & SCIENTIFIC PROGRAM

Monday, October 18, 1999

MORNING

09:00-09:15

WELCOME AND INTRODUCTION

Dr. Martha Piper

President, The University of British Columbia

Dr. John Dirks

President, The Gairdner Foundation

09:15-10:00

Moderator: Dr. John Cairns

HOW THE CELL SORTS MEMBRANE PROTEINS

Dr. Randy Schekman

Gairdner Awardee, 1996

Professor and Chair

Department of Molecular and Cell Biology

Howard Hughes Medical Institute

University of California, Berkeley

10:00-10:45

CELL SIGNALLING BY PHOSPHORYLATION

Dr. Tony Hunter

Gairdner Awardee, 1994

Professor

The Salk Institute

La Jolla, California

10:45-11:15

Break

11:15-12:00

Moderator: Dr. Bernie Bressler

ABC TRANSPORTERS

Dr. Victor Ling

Gairdner Awardee, 1990

Vice President Research, B.C. Cancer Agency;

Assistant Dean, Cancer Research;

Professor, Departments of Biochemistry and

Pathology and Laboratory Medicine, UBC

12:00-1:50

LUNCH

Speakers and Invited Guests at University Centre

Student Pods Site Visits

AFTERNOON

1:30-2:15

Moderator: Dr. Barry McBride

CANCER CYTOGENETICS: ROLE IN THE NEXT MILLENNIUM

Dr. Janet Rowley

Gairdner Awardee, 1996

Professor of Medicine

University of Chicago

2:15-3:00

SOCS-1—A VERSATILE INTRACELLULAR MODULATOR OF CYTOKINE SIGNALLING

Dr. Donald Metcalf

Gairdner Awardee, 1994

Professor Emeritus

The Walter and Eliza Hall Institute of Medical Research

The Royal Melbourne Hospital

3:00-3:50

Break

3:30-4:15

Moderator: Dr. Maria Krawe

MODELLING THE MOLECULAR PATHOGENESIS OF CANCER

Dr. Michael Bishop

Gairdner Awardee, 1984; Nobel Laureate, 1989

Chancellor and University Professor

Department of Microbiology and Immunology;

Director, G.W. Hooper Research Foundation

University of California, San Francisco

4:15-4:30

WRAP UP

Dr. Michael Smith

Gairdner Awardee, 1984; Nobel Laureate, 1993

Peter Wall Distinguished Professor

and University Killam Professor, UBC;

Director, Genome Sequencing Centre,

B.C. Cancer Agency


4:50-5:30

MEET THE PROFESSOR

Reception for Speakers and Student Pod Leaders

The Speakers' Luncheon and the Meet the Professor Reception for Speakers and Student Pod Leaders are being hosted by the Peter Wall Institute for Advanced Studies at the Koerner University Centre

40th Anniversary of the Gairdner Foundation International Awards



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