RECENT ARRIVALS

When it’s time to seek or renew research funding from a foundation, agency, granting council or institute, SFU researchers’ best friend on campus is their Faculty’s Grants Facilitator. These people know a great deal about many funding programs – what reviewers look for, how much money they will provide, what qualifies and what doesn’t – and will work with researchers so that their proposal stands the best possible chance of being approved.

This is why researchers in the Faculty of Arts and Social Sciences need to see Beverly Neufeld. A graduate of the London School of Economics, she has taught part-time at the Universities of London and Bristol and worked as a researcher, writer and editor in both the UK and Canada. Prior to coming to SFU in March 2005, she was a grants facilitator at the Michael Smith Genome Science Centre in Vancouver. In her new position she works with the Faculty’s Senior Research Grants Facilitator, Olena Hankivsky.

SFU’s Grants Facilitators are among the country’s best. In 2004, according to a Maclean’s magazine survey, SFU had the fifth highest ratio of NSERC and CIHR grants received of any major university in Canada (over 150 for every 100 faculty members) and was fourth in SSHRC grants (over 40 per 100 Faculty members). The Grants Facilitators played a key role in that success.

For a list of all SFU Grants Facilitators and the kinds of help they provide, visit the Web site of the Office of the Vice-President, Research at www.sfu.ca/vpresearch/frgf.html.

Martin Los is in the middle of an eight-month term at SFU’s UILO as a WestLink Innovation Network intern. WestLink’s programs support the acceleration of technology commercialization in Canada (www.westlink.ca). Its internship program helps fill the need for managers knowledgeable in early-stage technology development, with sufficient business acumen to manage technology commercialization.

Dr. Los has worked in small, medium and international organizations such as Zeneca and Unilever, and has a Ph.D. in applied biochemistry from the UK’s Zeneca/Nottingham University. His initial management training occurred with companies that include IBM and Procter & Gamble.

Since his arrival at SFU in September, Dr. Los has spent most of his time helping and learning from the technology managers – Ziba Afshar in the main office and Justine Bizzocchi at SFU Surrey. When his term here ends next spring, Dr. Los will move to a second placement, this time with a technology company or venture capital firm.

SFU at 40, UILO at 20

SFU is celebrating its 40th anniversary year in 2005-06, with “Radical by Design” as its theme. As it happens, the UILO is celebrating its 20th anniversary this year. It can claim a measure of “radical” as well: after all, back in 1985 there were many who thought it was highly unconventional for university scientists, engineers, staff and students to commercialize their innovations, start their own companies or accept royalties. Setting up the UILO to help them do those things was quite a “radical” idea. Twenty years later times have changed, and university technology transfer offices are widely recognized for their achievements.

About 100 people associated with the UILO gathered at the University’s Diamond Alumni Centre on November 17th to mark the occasion. Guests included inventors with whom the UILO has worked over the years, angel investors, patent lawyers, government and funding agency representatives, people from other UILOs and, of course, past and present staff.

“Innovation comes about by conception, misconception or accident,” quipped SFU Vice-President, Research Mario Pinto. He reminded guests that it is vital to invest in research that gives the researcher the freedom to explore.

The lively event celebrated the UILO’s impressive 20-year record. And no wonder! According to a 2003 survey by the Association of University Technology Managers, SFU ranked fourth in Canada (behind McGill, Queens and Dalhousie) in the number of US patents issued for every million dollars spent on research, and was second only to Waterloo in the number of spin-off companies formed. In the 2004-05 fiscal year alone, SFU researchers recorded 35 technology disclosures, bringing the 20-year total to just under 500. Twenty-six patent applications were filed by the UILO last year, and eight new technology assignment and revenue sharing agreements were signed. The total number of SFU spin-off companies formed is now 70, of which 44 remain active.

Moreover, UILO Director Mike Volker noted that the UILO has played a key role in setting up the TIME (Technology, Innovation, Management, Entrepreneurship) Business Centre, the Vancouver Angel Network, the Western Universities Technology Innovation Fund and the T-Net stock index of BC technology firms.

FUNDING LINKS

The Office of Research Services (ORS) regularly publicizes research funding opportunities for SFU faculty members. For further information, please see: www.sfu.ca/ors/fundingOpp.html
Hardly a day passes without at least one news item highlighting widespread fears of a global disease pandemic or alarms over Third World poverty. Twenty-first century health issues now involve entire populations and geographical regions. They concern lifestyles, living conditions, macroeconomics and the consequences of globalization. The establishment of Simon Fraser University’s new Faculty of Health Sciences (FHS), with its focus on these issues, seems perfectly timed.

“This will be a beacon for the world,” exclaimed economist Jeffrey Sachs. He was referring to the new FHS Global Health program in his address to SFU’s Fall Convocation. “It is exactly the kind of interdisciplinary ‘get-out-there-in-the-world-and-respond-to-the-world-challenges’ program that is needed.” Dr. Sachs, Director of the Earth Institute at Columbia University, is a special advisor to the United Nations and a consultant to governments and agencies on poverty reduction and disease control. After accepting an Honorary Doctor of Laws degree from SFU, Dr. Sachs agreed to be a visiting FHS lecturer.

Dr. Sachs’ participation is one of several indicators pointing to an auspicious future for SFU’s newest Faculty. Another is that the Faculty has the potential to link the University’s expertise in biomedical sciences, gerontology, kinesiology, psychology, statistics and computer science. As Dean David MacLean points out, “We provide the platform for an integrated, multidisciplinary academic approach covering broad areas of health -- particularly from a public and population perspective -- as opposed to the more individually-focused clinical approach that would likely exist if SFU had a medical school.”

A former medical health officer in Nova Scotia and Head of Dalhousie University’s Department of Community Health and Epidemiology, Dr. MacLean has brought both experience and enthusiasm to his position as SFU’s first Dean of Health Sciences. He has already compiled an impressive list of research challenges and opportunities for the Faculty. “There’s to be a comprehensive program in infectious diseases and immunology, run jointly with the Faculty of Science, plus a program in mental health and addiction at our downtown Vancouver campus. Of particular interest is the agreement we’ve signed with the Ministry of Health. It enables us to build a health database at SFU for the Ministry’s vital statistics information. This will enhance our expertise in health data mining and data mapping.” Other FHS foci are aging and chronic illness, and environmental health and toxicology.

The Faculty welcomed its first 18 Masters students in September 2005. They include health practitioners, social scientists, health administrators and community health researchers, enrolled in SFU’s Masters program in Population and Public Health. When they graduate, they will be qualified to work in research institutes or health authorities, for example, where they might analyze data relating to health issues or assess the effects of health policies. There are also opportunities for them in company or institutional occupational health departments. According to Dean MacLean, people with this skill set are much in demand.

Perhaps the boldest, most innovative FHS initiative is the Global Health program praised by Jeffrey Sachs in his Convocation address. The program is led by physiologist and biomedical engineer Dr. Arun Chockalingam, an internationally recognized epidemiologist and an expert in the reduction of hypertension through behaviour modification. “We’ll be offering a Masters degree in Global Health, beginning in January 2007,” he explains. “A novel feature of the one-year program is that it includes a semester of hands-on field work, during
SFU Innovators Soar to Success

There was cause for celebration at SFU recently: eight of the 11 SFU applications to the Natural Sciences and Engineering Research Council’s (NSERC) Idea to Innovation (I2I) program have been successful. The national success rate is just under 50%; SFU’s approaches 75%, which sustains the University’s impressive record for obtaining support from Canada’s national granting agencies.

NSERC’s I2I program provides funding to university researchers for early stage R&D activities leading to the transfer of technology to a Canadian company. Its rules require that each innovative idea must be described according to the university’s Intellectual Property policy and that the University/Industry Liaison Office (or equivalent) endorse it. From the outset, the UILO is required to be directly involved in preparing the proposal.

“The researcher’s section of the application describes the proposed research, and we discuss issues such as patentability, market potential, commercialization and the benefits to Canadian industry,” explains UILO Technology Manager Ziba Afshar, who participated in the preparation of several of the successful SFU I2I applications.

Daniel Leznoff, Associate Professor of Chemistry, is among those whose proposals received NSERC approval. Together with his colleague Dr. Hogan Yu, he was awarded $125,000 to develop a prototype sensor to detect and identify certain volatile and potentially harmful organic compounds and gases in the air. The sensor will employ novel vapochromic materials (substances that display colour or luminescence changes when exposed to volatiles) that his research group has recently discovered.

“Ziba Afshar suggested that my vapochromic polymer research would be an excellent fit for an I2I proposal, and provided valuable assistance during the early stages of the process,” he says.

Physiologist Max Donelan’s innovation is a biomechanical energy harvester, for which he received a grant of $124,800 from the I2I program. “It’s a device that captures the mechanical energy normally wasted during human movement and converts it into electrical energy,” he explains. “This can then be used to power consumer portable devices like cell phones or laptop computers, as well as biomedical devices like prosthetic limbs and neuro-prostheses.”

Dr. Donelan credits former UILO Technology Manager Matt Ferguson for suggesting his team contract out some of the hardware construction. “It means we can have other experts working on this aspect without having to spend a lot of time supervising people here. As well, the UILO helped us find a lawyer to handle the provisional patent application.”

Application deadlines for NSERC’s I2I program are in January, April, July and December. Precise dates and other information are on the NSERC Web site (www.nserc.ca). UILO staff prefer to have about a month to compile a thorough and convincing application; this gives them sufficient time to develop good, solid arguments for the proposal and a clear plan of action.

“We do thorough market research to determine need and opportunity,” says Ms. Afshar. “We also ensure that an SFU research group is capable of carrying out the project in the relatively short time the program requires. Even so, new issues tend to appear during the application preparation process. Sometimes this forces us to redirect our initial approach and even redefine the end products and markets.

“Successful applications to the I2I program will add significant value to the excellent discoveries being made at SFU. Meanwhile, I enjoy the process of product and market identification, and working with researchers to develop a line of reasoning that will effectively demonstrate the novel technologies, highlight their advantages, overcome any disadvantages and show how robust and commercially viable they are.”

A Beacon for the World Continued

which students will be immersed in world health challenges. To facilitate this, we have signed formal agreements with post-secondary institutions in China, Sri Lanka and India; other such agreements are being negotiated.”

The creation of the first FHS Research Chair, endowed by Merck Frosst Canada Ltd. and the Arthritis Research Centre of Canada in Vancouver, has launched an interdisciplinary research program devoted to arthritis and musculoskeletal diseases. Applications for additional research chair support are pending.

Meanwhile, in October 2005, federal Minister of Health Ujjal Dosanjh was on campus to announce Canadian Institutes of Health Research (CIHR) funding of $3.25 million in support of health-related research at SFU. Many of the scientists receiving CIHR funding are FHS associates or full-time faculty.

For now, the Faculty of Health Sciences is located in SFU Burnaby’s West Mall Centre. This spring, construction will begin on the new $41.5 million health sciences building in the northeast sector of the campus. It is scheduled to open in 2007.
SFU Scientists and a Spin-off Company Win Major Awards

SFU was honoured in October at both ends of the country. At a ceremony in Halifax, Industry Minister David Emerson presented NSERC’s prestigious Synergy Award for Innovation to SFU and VSM MedTech Ltd. of Coquitlam.

“Synergy prizes celebrate effective partnerships that connect university research leaders with the private sector to deliver research results to the marketplace,” said NSERC Executive Vice-President Nigel Lloyd.

When VSM MedTech’s predecessor company, CTF Systems, was established in 1970 it was SFU’s first spin-off company. The Synergy Award recognizes that the company and university researchers have enjoyed a lengthy and productive partnership, especially in the development of revolutionary medical imaging technologies. Equally important has been the application of those technologies in the understanding and treatment of brain disorders and how the brain processes complex information.

Dr. Hal Weinberg, now Professor Emeritus of Kinesiology and Director of the Office of Research Ethics at SFU, and Dr. Jiri Vrba, VSM MedTech’s Chief Technology Officer, accepted the award at the Halifax ceremony. Both have been involved for many years with the research and technological development being recognized. The award includes a $25,000 NSERC grant to Dr. Weinberg in support of his research, now directed towards identifying characteristics of brain function in individuals with disabilities so that educational programs can be developed to meet their particular needs.

The same week that Dr. Weinberg and Dr. Vrba received their NSERC Synergy Award in Halifax, two other SFU scientists were being recognized here at home. Established in 1980 as the BC Science and Engineering Awards and renamed the BC Innovation Council Awards for the organization that now administers them (www.bcinnovationcouncil.com), these awards honour the outstanding achievements of BC’s scientists, engineers, industrial innovators and science communicators.

Dr. Mario Pinto, Professor of Chemistry and SFU Vice-President, Research, received the Frontiers in Research Award. This award recognizes an individual or small team whose innovative research contributions have led to major new advances in scientific or technological knowledge. In Dr. Pinto’s case the frontier is glycoscience and, in particular, the topographical mapping, subsequent synthesis and biological investigation of complex carbohydrate molecules and their molecular mimics. This has major implications for vaccine and pharmaceutical development.

The BC Innovation Council’s Young Innovator Award recognizes an individual under the age of 35 who has made a significant contribution to developing innovative science or technology, and has played a major role in the development of an innovation or research breakthrough. The BC Innovation Council’s Young Innovator of 2005 is Dr. Jian Pei of SFU’s School of Computing Science. Dr. Pei is developing powerful data analysis techniques for novel data-intensive applications. Applications of his work range from assisting insurance companies in identifying patterns among millions of claims to helping retail stores decide what products should be grouped together.
I am pleased to announce that a new Community Trust Endowment Fund (CTEF) has been established at SFU. The fund will provide a maximum of $500,000 each year per approved project over a maximum of five years, with the possibility of renewal. The Terms of Reference for this Fund were approved by the Board of Governors on November 24th.

The CTEF will channel funds received from the rental of UniverCity buildings into the five major initiatives outlined in the University’s Strategic Research Plan (SRP):

• Communication, Computation, and Technology
• Culture, Society and Human Behaviour
• Economic Organization, Public Policy, and Global Community
• Environment
• Health

These are integrative strategic research themes that cross disciplinary and administrative boundaries. The strategic investment of resources aligned with this thematic approach will give SFU a distinctive edge and comparative advantage, leading to our goal of being the most research-intensive comprehensive university in Canada.

The SFU Community Trust Endowment Fund will support the following types of endeavours:

• Research assistantships for graduate or undergraduate students
• Salary for visiting faculty and research associates
• Salary and benefits for new academic appointments for external candidates
• Equipment, facilities and data for support of new faculty and students
• Conference sponsorships

Calls for proposals will be issued every six months until January 1, 2008, and thereafter on an annual basis.

MESSAGE FROM THE VICE-PRESIDENT, RESEARCH

Dr. B. Mario Pinto

SFU Community Trust Endowment Fund

Research teams comprised of five or more SFU faculty members from at least two disciplinary areas are invited to submit full proposals to the Vice-President, Research Office by Friday, March 31, 2006.

Support letters from relevant Chairs/Directors and Deans must accompany all proposals. Please refer to the Fund’s Terms of Reference for the evaluation criteria and procedure.

Questions?
See www.sfu.ca/vpresearch for more information or call the VP Research Office, (604-291-) 4152
The Vice-President, Research will host five half-day meetings, open to all faculty, to discuss initiatives under each of the five research themes identified in SFU’s Strategic Research Plan.

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<tr>
<th>Date</th>
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<th>Theme</th>
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<tr>
<td>Monday Jan 9</td>
<td>Halpern 126</td>
<td>Communication, Computation and Technology</td>
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<tr>
<td>Friday, Jan 13</td>
<td>Library 7200</td>
<td>Culture, Society and Human Behaviour</td>
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<td>Friday, Jan 20</td>
<td>Library 7200</td>
<td>Economic Organization, Public Policy, and Global Community</td>
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<td>Tuesday, Jan 24</td>
<td>Halpern 126</td>
<td>Environment</td>
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<td>9:30 a.m.–2:30 p.m.</td>
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<tr>
<td>Wednesday, Feb 1</td>
<td>Halpern 126</td>
<td>Health</td>
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All sessions are held from 8:30 a.m. to 1:30 p.m. with the exception of the Tue, Jan 24th session noted above. Breakfast and lunch will be provided. RSVPs required by Thursday, Dec 15 to vprsec@sfu.ca.

The President and Vice-Presidents, Academic and Research, will host a series of monthly social events relating to SFU’s Strategic Research Plan beginning this February. The cost of hosting these events will be shared between the operating budgets of these three offices.

Timed to follow the wrap-up of the Strategic Research meetings noted above, these social events will provide an opportunity for faculty members to interact with one another and with the University administration over a casual buffet dinner.

With one event for each of the five thematic areas outlined in the Strategic Research Plan, there will be three dinners at the Burnaby campus, and one each at the Surrey and Vancouver campuses. The first dinner has been scheduled for Tuesday, February 7th at the Diamond Alumni Centre. RSVPs are required to vprsec@sfu.ca by Friday, January 21, 2006.

Please bookmark the following URL for updates on these events:
www.sfu.ca/vpresearch/CTEF/SR_meetings_and_socials.htm