

on CAMPUS

Volume 2 No. 5

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YOU ARE GETTING SLEEPY, VERY SLEEPY

Professor advocates self-hypnosis to improve grades **Page 3**



BRAIN POWER

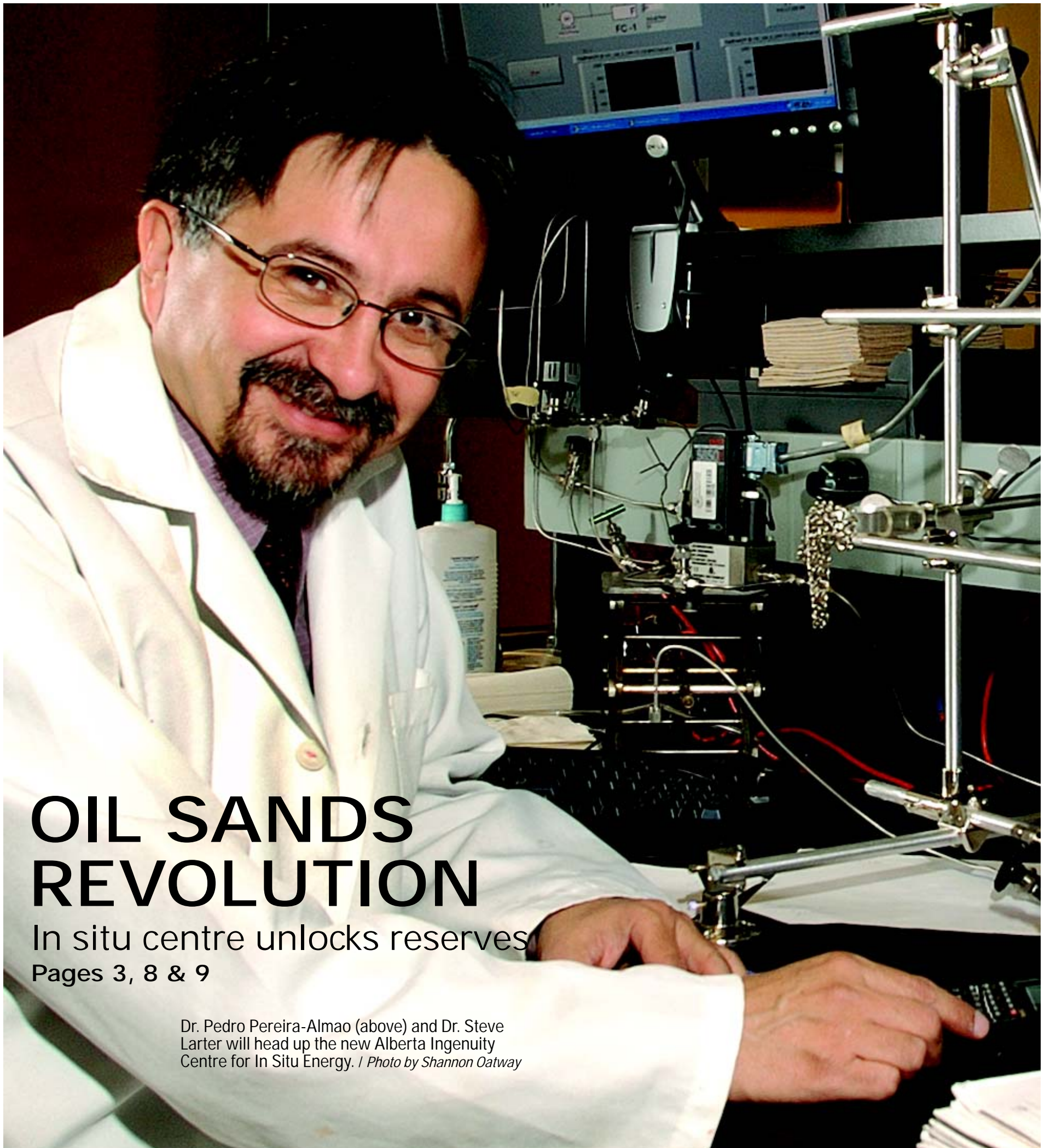
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CREATING KNOWLEDGE

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DISCOVERY ENERGY CREATIVITY COMMUNITY



OIL SANDS REVOLUTION

In situ centre unlocks reserves
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Dr. Pedro Pereira-Almao (above) and Dr. Steve Larter will head up the new Alberta Ingenuity Centre for In Situ Energy. / *Photo by Shannon Oatway*



U of C professor Dr. Richard Tay is the first Research Chair in Road Safety.

Chair focuses on road safety

By Kirk Thurbide

University of Calgary professor Dr. Richard Tay has been named the first Department of Civil Engineering Research Chair in Road Safety.

Tay is a professor in Road Safety whose research interests include transport economics, modeling and public policy, with special emphasis on issues relating to road safety. His research involves the application of engineering, health, economics, marketing, psychology and statistical models to analyze road crashes and the development, implementation and evaluation of multidisciplinary measures to improve road safety and reduce the social cost of road crashes.

Road safety is a critical issue in Alberta. Last year alone, Alberta roads saw 113,357 collisions, 385 fatalities and 26,426 injuries.

The Alberta Motor Association (AMA) is an integral partner in the funding of the Road Safety Research Chair. As part of its 75th Anniversary Legacy Project, the Alberta Motor Association has committed \$750,000 toward an endowment fund for Canada's first research

Chair in Road Safety at the University of Calgary. The chair will lead a multi-disciplinary, inter-disciplinary team that will focus on the complexities of road engineering, vehicle design, driver behaviours, and other factors that make up the totality of the traffic safety model. A worldwide search was made to find internationally renowned, senior researchers who have established outstanding reputations in the area of road safety. An international search for additional funds to top up the \$3 million endowment necessary to guarantee the chair's funding in perpetuity is also ongoing.

"This is a timely and relevant appointment," says Don Szarko of the Alberta Motor Association. "Our partnership with the Department of Civil Engineering is a positive step towards increasing the safety of Alberta roadways."

Tom Brown, professor and head of the Civil Engineering department at the U of C, is one of the leading supporters of the road safety chair. "The university already has a strong transportation engineering group, which includes the department of psychology, and the Van

Horne Institute for International Transportation and Regulatory Affairs, along with various engineering departments. This makes the U of C an ideal home for the chair." Tay's current research projects include understanding road user behaviour, road safety advertising, traffic enforcement, fleet safety, road safety programs and policy evaluations, intelligent transport systems and highway engineering.

Industry, governments, and academic institutions will be the primary beneficiaries of this research chair, both in terms of developing a "Home Team" of safety expertise that will serve Alberta's needs, but also position Alberta as a leader in Road Safety Research and exporter of knowledge and expertise. The attraction of leading research candidates and innovation in a variety of research areas will bring international recognition for the work conducted by the chair. Further, it is expected that new initiatives in road safety will be tested within Alberta resulting in significant collaboration between industry, municipalities and provincial agencies.

Prof named to advisory board

Dr. Daniel Lai, an associate professor of Social Work and Alberta Heritage Health Scholar, was recently appointed to the Canadian



Institutes of Health Research (CIHR)'s Institute of Aging Advisory Board. The institute supports research to promote healthy aging and to address causes, prevention, screening, diagnosis, treatment, support systems, and palliation for a wide range of conditions associated with aging.

As one of the leading researchers in multicultural health and aging in Canada, Lai's research program focuses on ways in which culture affects the health of visible minority seniors and the ways cultural factors impact family caregivers.

U of C receives gift of Chinese books

The University of Calgary has received a gift of 500 books written in Chinese from the People's Republic of China. The gift, given through their State Office for Teaching Chinese, includes dictionaries and books on Chinese grammar, 20th century fiction, traditional literature, history, philosophy and culture.

Mr. Song Xizhu, the Consul General of the People's Republic of China, Calgary, and Madam Lin Xu, the Education Consul with the People's Republic of China, Vancouver, were present at the recent donation ceremony, as well as Dr. Cen Huang, Executive Director, the International Centre at the University of

Calgary. All were instrumental in arranging for the donation. The selection of books was made by Dr. Shu-ning Sciban, professor of Chinese Language and Literature in the University of Calgary's Department of Germanic, Slavic and East Asian Studies.

The University of Calgary Library currently has more than 8,700 books that feature information about China, Chinese history, language, business and culture. In addition, digitization of key historical Chinese Vancouver newspapers is currently in progress. This information will be available to the public via the Multicultural Canada website, created in collaboration between the University of Calgary, Simon Fraser University, the Sien Lok Society of Calgary and the Multicultural Historical Society of Ontario.

Researchers collaborate through NECTAR

The federal government announced recently a contribution of \$4.5 million to the Network for Effective Collaboration Through Advanced Research (NECTAR), a new Science and Engineering Research Canada (also known as NSERC) research network that will develop technologies to make virtual collaboration at a distance as productive and efficient as working face to face.

NECTAR's research will be carried out by 11 researchers at six universities: the University of Toronto, the University of British Columbia, the University of Calgary, the University of Saskatchewan, Dalhousie University,

and Queen's University.

In addition, partners from the public and private sectors will contribute nearly \$1.2 million to the project. They will also contribute expertise and resources to ensure that the research results are disseminated widely. The network plans to provide training to graduate and undergraduate students as well as to two postdoctoral fellows each year.

Dr. Saul Greenberg of the University of Calgary and Dr. Carl Gutwin of the University of Saskatchewan will act as team leaders for the network along with Dr. Ronald Baecker, the network's scientific director and a professor of computer science at the University of Toronto.

Bull trout paper wins prize

John R. Post, Department of Biological Sciences, was recently awarded the "Best Paper of the Year" in the North American Journal of Fisheries Management for the publication "Assessment of Alternative Harvest Regulations for Sustaining Recreational Fisheries: Model Development and Application to Bull Trout." The article was coauthored with graduate students Craig Mushens and Andrew Paul and Alberta Provincial Biologist Michael Sullivan. The paper was commended for its integration of demographic theory with fisheries management practice and will provide a key tool for developing management strategies for bull trout, the designated Provincial Fish of Alberta.

To the Point features news in brief.

Clarification

Ksenia Patsula, an International Relations student and employee of the Haskayne School of Business, will participate in an internship at the Gorbachev Foundation in Moscow. This program is funded by the Canadian International Development Agency (CIDA) through the International Youth

Internship Program with the International Centre of the U of C as the implementing organization. It is a youth employment program, supported by Human Resources Development Canada, which offers recent graduates the opportunity to gain a valuable first international work experience. The foundation

has been working with the U of C's International Centre since 1992 successfully supporting joint Canadian-Russian academic partnerships in the areas of public policy in Russia (UCGF Project). More information about the project partnership can be found at www.ucgf.ca.

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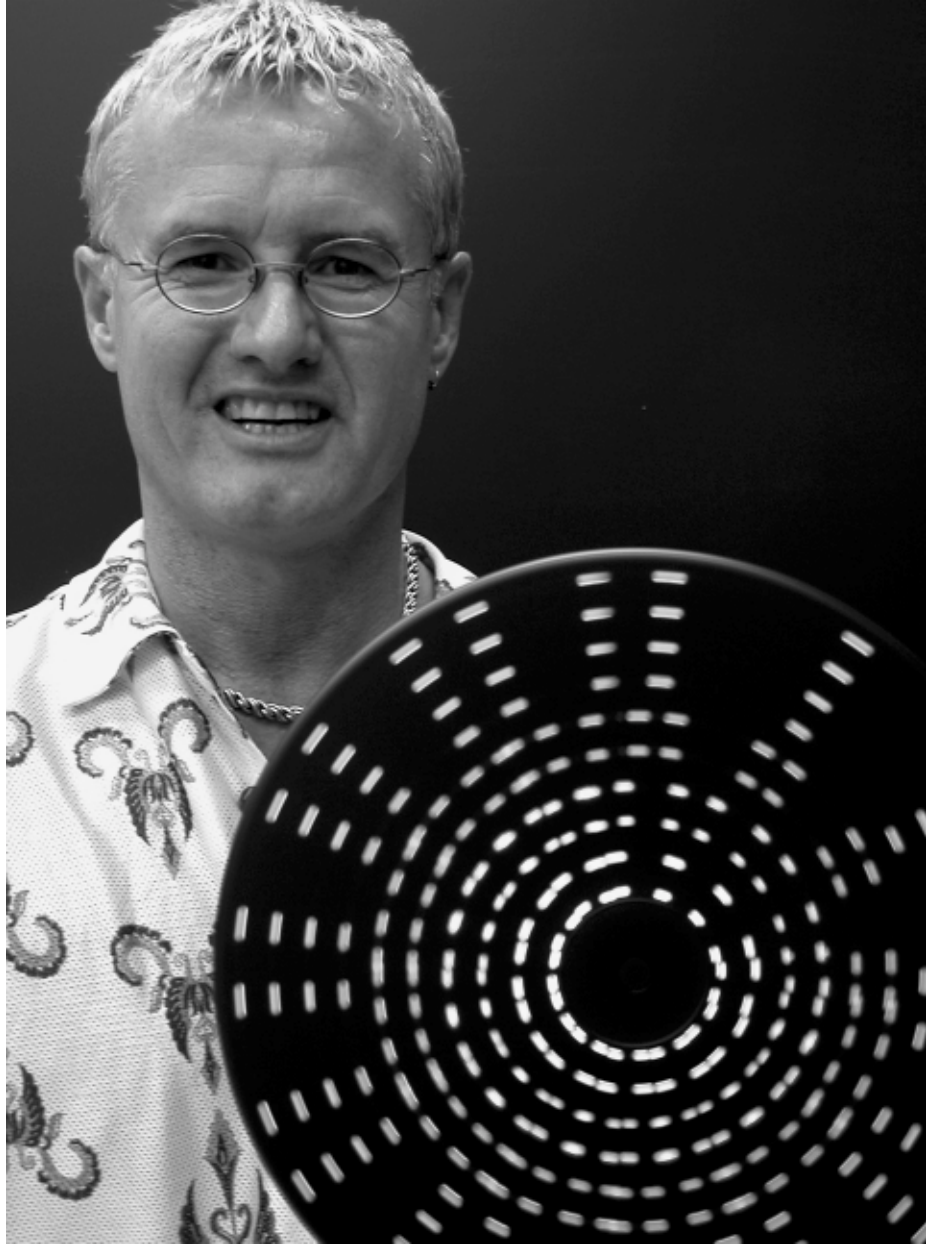
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Repeat after me: 'I am going to be a super student'



Kevin Alderson pays particular attention to what he calls four keys to success: belief in yourself, passion, persistence and life balance. / Photo by Ken Bendiksen

By Greg Harris

You are getting sleepy, very sleepy – and when you wake up, you'll be a super student. That's essentially the promise of a new book published this month by a University of Calgary counselling psychologist, who shows students how to use self-hypnosis to improve their marks by at least two letter grades.

Dr. Kevin Alderson, an assistant professor in the Faculty of Education, says that any student of average intelligence should be able to move from a C to an A average by applying the techniques outlined in his new book, *Grade Power: The Complete Guide to Improving your Grades Through Self-Hypnosis*.

"What people need to know is that this is not a flaky book," Alderson says. "It's based on good, solid research and clinical practice. A lot of hypnosis books are not based on nearly as much background work as this has behind it."

Alderson says he's read just about everything ever written about applying self-hypnosis to learning and has distilled the best practices in an easy-to-read package aimed at students in Grade 9 and higher. For

Hypnosis has a long history of success in many applications, but Alderson cautions that it's not a magic cure-all

Grade Power, he referenced close to 200 books and journal articles.

"There are two components to the book," he explains. "One outlines the best conventional methods students can use to improve their marks, and the other shows how to use self-hypnosis to harness the amazing power of the subconscious mind." The three self-hypnosis techniques offered are visualization, the use of positive suggestions and affirmations, and hypnosis scripts that students can record and listen to themselves.

Alderson also pays particular attention to what he calls four keys to success: belief in yourself, passion, persistence and life balance. "I call this a

'success formula' and you can apply it to any area of your life. This happens to be a book about improving academic performance, but it could just as easily have been a book about weight loss."

Hypnosis has a long history of success in many applications, and various psychiatric and psychological associations around the world recognize it as a useful therapeutic practice. Alderson cautions, however, that it is not a magic cure-all. "The most effective students, regardless of whether they use self-hypnosis as an adjunct to their success, need to do two things: dedicate sufficient time to school, and use effective study techniques."

Alderson has a long track record in helping students succeed, beginning as a guidance counsellor at Mount Royal College in 1985, where he quickly earned the nickname 'Keveen' for his clinical use of hypnotherapy. He is a chartered psychologist and a licensed hypnotherapist. He joined the U of C in 2001. *Grade Power* is published by Insomniac Press, priced at \$21.95, and available at the U of C Bookstore and elsewhere.

Excerpt from Grade Power: The Complete Guide to Improving Your Grades Through Self-Hypnosis

Example of a script to use for self-hypnosis

Passion

You are motivated to know yourself more fully [pause for one breath]. You embrace the uniqueness that makes you who you are, and coming to know your likes and dislikes feels gratifying [pause for one breath]. Knowing that you don't need to like everything or everybody is, in fact, liberating [pause for one breath]. Becoming your own person allows you to love the things and the people that really matter [pause for one breath]. You know that you will make a difference in this life - your impact will be felt [pause for one breath]. Underlying the difference you will make is great passion toward important life goals [pause for one breath]. Increasingly you find yourself becoming a passionate individual, a person who strives toward your own commitments and beliefs [pause for two breaths].

Your goals are becoming ever more crystallized and more real [pause for one breath]. The more you focus on them, more important they become to you [pause for one breath]. You deserve to succeed in school and in life [pause for one breath]. This is, after all, your life, and no one can achieve what is important to you other than yourself [pause for one breath]. You are continually coming to better terms with your priorities, and acting on them accordingly [pause for two breaths].

Your most important goals take on deep and personal meaning [pause for one breath]. They may not have meaning to other people, and that is fine [pause for one breath]. It is enough that your goals serve your purposes in life [pause for one breath]. The more you focus on any particular goal, the more it becomes realized [pause for one breath]. Your passion toward your important goals sustains you during the times of dedicated effort [pause for one breath]. Nothing important ever occurred to anyone without dedication and perspiration [pause for one breath]. You are up for the fight - you are a passionate individual [pause for two breaths].



Pedro Pereira-Almao (left), will lead a team of researchers at the new Alberta Ingenuity Centre for In Situ Energy. Here he is with Alejandro Vasquez, an MESC student, and Francisco Lopez, a Postdoctoral Fellow.

Centre to unlock oil reserves

Alberta Ingenuity this week awarded up to \$9 million to establish a major new energy research centre based at the University of Calgary. The Alberta Ingenuity Centre for In Situ Energy will bring together top researchers to study more efficient, cost-effective, and environmentally sustainable processes and technologies to improve recovery and upgrading of Alberta's vast and virtually untapped bitumen reserves.

"The Alberta Ingenuity Centre for In Situ Energy is a true example of Albertan ingenuity," said Dr. Peter Hackett, Alberta Ingenuity's President and CEO.

"We've got a huge source of energy in the ground that we need to find new and better ways of getting at, that are less harmful to our environment, and that ensure we continue to enjoy this resource for a long time. This centre will integrate the exceptional people, tools, and resources needed to do just that."

The Alberta Ingenuity Centre for In Situ Energy may receive up to \$7.5 million in funding over five years. In addition, two international science and engineering research experts, Dr. Steve Larter and Dr. Pedro Pereira-Almao, have been recruited to Alberta with \$1.5 million in support to lead the centre's research program. Total Alberta Ingenuity funding for the new centre is up to \$9 million.

"Essentially, we're trying to develop technology

for creating a whole new set of processes for recovering the energy from the oil sands in a clean way and avoiding the environmental impacts," says Larter, the U of C's Canada Research Chair in Petroleum Geology in the Department of Geology and Geophysics.

U of C President Dr. Harvey Weingarten welcomed the funding.

"The Alberta Ingenuity Centre for In Situ Energy reflects the exceptional quality of researchers at our province's universities. This

support is vital to Alberta's ability to achieve its goals in the knowledge-based economy and we commend Alberta Ingenuity for its foresight.

"(The) announcement also adds considerable momentum to the Institute for Sustainable Energy, Environment and Economy – which will coordinate energy- and environment-related research and education at the university."

The centre is aligned with Alberta's Energy, Climate Change, and Water for Life strategies. "The Alberta Ingenuity Centre for In Situ Energy is an investment in Alberta's energy future and builds on the work we've been doing to ensure the sustainability of this important sector," said Victor Doerksen, Minister of Innovation and Science. "The centre will complement the work being done through Energy INet and will play a key role as the province continues to implement its energy innovation strategy."



Steve Larter

INSIDE: How In Situ really works. See pages 8 & 9.

United Way gifts touch many lives

By Natalie St-Denis

Kim Kadatz realized how much an impact the United Way has on people one day when she ran into a family friend at the Association for the Rehabilitation of the Brain Injured (ARBI).

"It was early on in my career at the United Way and we were making rounds to the various organizations supported by the United Way – and then I saw our family friend, who suffered brain damage at the age of 16 when undergoing a routine anesthetic for tonsil removal. I realized then that any of us could need these services at some point in our lives."

Before coming to the University of Calgary, Kadatz spent 10 years working as a fundraiser at United Way. "Before working for the United Way, I wasn't completely aware that there is a whole section of our community who requires some sort of social support," says Kadatz, Director of Development at the Faculty of Kinesiology.

Donations to the Calgary United Way are invested for impact. Priority is given to issues of greatest concern to the community and investment contracts are often spread over several years to help agencies plan for the future and make the best use of available



Kim Kadatz



resources. More specifically, donations will help economically challenged families, people living in vulnerable situations, children and youth, individuals living in poverty and people experiencing violence in their home or community.

Through directed giving, donors can stipulate that their United Way donation go to the U of C, such as to the new faculty and staff fund.

Kadatz joined the Faculty of Kinesiology two years ago – she went from fundraising for the United Way to fundraising for the university. Although entirely committed to supporting the university she still strongly believes in supporting the United

Way. "I've maintained my yearly contributions to the United Way, and the other half now goes to the university to support education," says Kadatz. With her background, it is only fitting that the faculty has given Kadatz the role to encourage people in her faculty to donate to the United Way.

Every dollar given to the United Way translates into real help for real people. For instance, \$100 pays for two hours of residential assessments to help individuals with a physical disability increase their mobility and independence.

"A lot of people enjoy the BBQs and dress down days that come with the United Way Campaign, but what's really important is that people take that opportunity to reflect about the value of their gift. Every little bit helps and if everyone gave \$5 each week rather than buy their lunch one day a week it would make a huge difference. That philanthropic gift will bring so much to someone in the community and it's a great way to give back to the community," says Kadatz.

For information on donating to the United Way, visit www.ucalgary.ca/unitedway.

HOT TOPIC

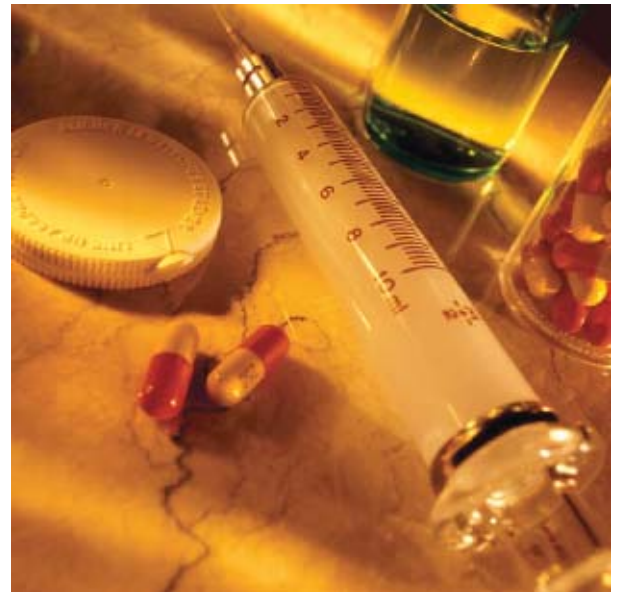
"HE WAS SUFFERING", EXPLAINED MARIELLE Houle after being charged with aiding and abetting in the suicide of her playwright son, who had multiple sclerosis. Many cases have come to light in recent years regarding the issue of legalizing euthanasia, including the cases of Robert Latimer and Sue Rodriguez. In your opinion should the law change to allow for assisted suicide?

Jennifer Koshan
Assistant Professor,
Faculty of Law

I agree with the dissenting reasons in the Sue Rodriguez case. Able-bodied persons are free to commit suicide, but some persons with disabilities are only able to end their lives with assistance, which is criminally prohibited. The criminal prohibition has the effect of creating an arbitrary distinction in terms of who can choose to end their lives, and thus discriminates on the basis of disability. While the state has an interest in protecting persons with disabilities against "mercy killings" that are performed without their consent, this can be achieved without criminalizing assisted suicide. The courts could supervise requests for assisted suicide, and only permit them where persons with disabilities were competent to make such a decision, and did so freely and voluntarily.

Linda Carlson
Clinical Psychologist & Assistant Professor
Department of Psychological Resources,
Department of Psychology and Department of Oncology

It has been documented in a study by Dr. Harvey Chochinov, a psychiatrist in Winnipeg, that the majority of patients requesting assisted suicide in a palliative care setting were suffering from clinical depression, a condition characterized by suicidal thoughts. When a major depressive disorder is treated, generally, the wish for hastened death also recedes. Hence, if a patient is requesting assisted suicide, before even considering the request, a full assessment for mood disorders should be conducted by a trained



"What is needed is a change in the law," says John A. Baker, professor of philosophy.

mental health professional. If such a disorder is found, it should be adequately treated with antidepressant medication and/or psychotherapy. Only when a patient is free of any mental disorders would one even consider the request for hastened death.

Steve Simpson
Professor, Department of Psychiatry & Department of Oncology
Faculty of Medicine

In a country where there are significant barriers to the provision of treatment for depression, euthanasia should not be legalized. Without exception, every survey of chronically ill people in Canada finds that there are problems with access to psychological and psychiatric services for them. If we cannot care for them in living, how can we hope to care for them in dying? I believe that the efforts in this direction (legalizing euthanasia) are misguided and that our society has to grapple with providing adequate palliative care services first. Every study I have read on the topic identifies that desire to hasten death is more related to out of control symptoms e.g., pain and depression, than any rational

decision that life "no longer has meaning."

John A. Baker
Professor, Department of Philosophy

What is needed is a change in the law. Parliament needs to move. We need to allow physicians to prescribe lethal medication, to supervise its administration and to help administer it if, as in Sue Rodriguez's case, the patient cannot administer it herself. We need regulations about how this is to be done, and under what conditions. And we need safeguards in place to regulate the process and to prevent new kinds of abuse. We need to make operational a system to check whether the classic conditions are satisfied: the patient must consent to the procedure, she or he must be competent to do so, she or he must not be clinically depressed, and her or his condition must be irremediably terminal. And we need to give our physicians better training in pain management and about dying. And we need to do all this now.

Compiled by Latha Attawar.

Hot Topic asks U of C experts their views on news of the week.

MAKING NEWS

This time of year, hunters are sometimes the hunted in the Canadian Rockies. This was evident last week after a local woman on a hunting trip was mauled and seriously injured by a grizzly bear in the Blairmore region. **Dr. Steve Herrero**, professor emeritus of environmental design, says it's not uncommon for hunters, who tend to quietly travel alone or in small groups, to surprise bears. In fact, the majority of bear attacks outside of national parks involve hunters, Herrero told CBC radio. He also pointed out to the Calgary Herald that this year's poor berry crop also means bears are covering wider ranges as they look for their pre-hibernation feast.

The tragic submarine fire aboard the HMCS Chicoutimi shows how the Canadian military is consistently forced to "make do" with substandard equipment, argued **Dr. David Bercuson** in a recent National Post editorial. The director of the U of C's Centre for Military and Strategic Studies added that the Chicoutimi is from a

line of British-built submarines that have had problems from the moment they were launched. "The subs entered British service three years late due to the time and expense needed to bring them up to a safe operational level. Why did Canada take them off Britain's hands? Because they were the best available at a price the government was willing to pay. Obviously, that is a far different thing from saying they were the best available."

Calgary Sun reporter Nadia Moharib, a Christian of Arab descent, walked city streets dressed as a traditional Muslim woman as part of a series profiling the Muslim experience. She spoke with communication and culture professor **Karim-Aly Kassam** about the stereotype of Muslims as terrorists. "People have been at war with people who are Muslims; one way to attack someone is to create a stereotype. ... It's like saying all Catholics are the same and all Protestants are the same and that is rubbish," he said.

You may see lower prices in the produce section. The Canadian dollar went up to 80 cents US last week, marking the loonies' strongest showing since 1993. "As the dollar goes up, exports become more expensive and imports become cheaper," economics professor **Dr. Frank Atkins** told the Calgary Herald. "It will help fruits and vegetables, we'll hopefully see it when the winter comes."

A negative self image of our own country is one reason why Canadians don't stampede to see Canadian films, says a communication and culture professor who wrote a new book called *One Hundred Years of Canadian Cinema*. "Being Canadian only seems to be a negative modifier in our own country," **George Melnyk** told the Calgary Herald. "Canadian cinema has a multiple identity that is recognized by the world as having validity and distinctiveness." Compiled by Dennis Urquhart

Making News highlights staff and faculty featured in the media.

Program attracts overwhelming response

In response to overwhelming interest in the Directors Education Program (DEP), the Haskayne School of Business will offer a second session to begin in January. The debut offering of the program, which is now filled to capacity, begins in November.

Offered in partnership with the ICD Corporate Governance College and the University of Toron-

to's Joseph L. Rotman School of Management, the program is designed to train Canada's corporate directors to continue meeting and exceeding growing expectations of good corporate governance.

"Boards of directors are operating under a brighter spotlight than ever," says Doug Baldwin, Chairman of the Board at Talisman Energy, who is

enrolled in the debut offering of the program at Haskayne. "This program offers all of us a chance to brush up on our skills, learn about emerging issues, and connect with our peers working with boards throughout the business community."

Applications for the Directors Education Program are now being accepted. The application deadline is November 24.

Donation creates brain institute

By Karen Thomas

A \$10-million gift to the University of Calgary from local businessman Harley Hotchkiss will create a centre of excellence in brain research, education and innovative clinical care.

Researchers at the Hotchkiss Brain Institute will conduct leading-edge research in areas such as stroke, brain repair, spinal cord injury and nerve regeneration and functional recovery, neural cell signaling, epilepsy, mental disorders and brain imaging.

"We are on the verge of medical breakthroughs that many of us would never have imagined," says Hotchkiss, a long-time supporter of medical research and health care in Alberta. "I am honoured to support this institute because it is founded upon excellence. I have great hope that it will redefine neuroscience and mental health for people everywhere."

Alberta Premier Ralph Klein, the University of Calgary and the Calgary Health Region announced the gift Friday.

Klein said the institute will benefit many Albertans.

"I would like to extend my heartfelt thanks to Harley Hotchkiss on behalf of not only Albertans but people the world-over who will ben-

People the world-over will benefit from new research and treatments for stroke, Parkinson's disease, and spinal cord injuries.

efit from new research and treatments for stroke, Parkinson's disease, and spinal cord injuries."

The Hotchkiss Brain Institute's mission, to advance care by accelerating discovery, is the cornerstone of its unique, integrated design. "This just isn't happening anywhere else," says Dr. Grant Gall, Dean, U of C Faculty of Medicine. It brings together world-respected scientists and physicians from the University of Calgary Faculty of Medicine, Calgary Health Region and Canadian Centre for Behavioural Neuroscience at the University of Lethbridge.

"The Hotchkiss Brain Institute harnesses the exceptional research and care-giving teams in stem cell biology, multiple scler-

osis, Alzheimer's, and brain imaging. This outstanding collaboration of neuroscientists is creating a model that others will follow," says Gall.

Jack Davis, president and CEO, Calgary Health Region, said the institute will train the next generation of health care and research professionals.

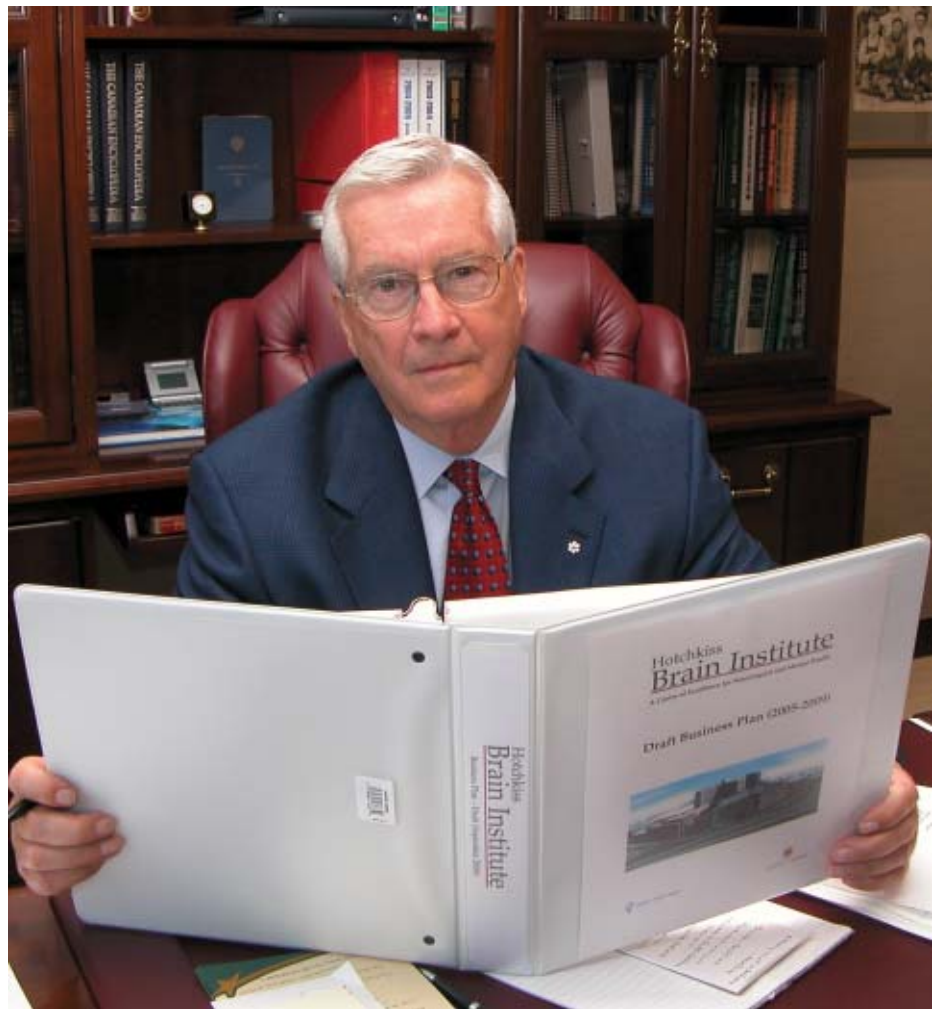
"The Calgary Health Region is very pleased to be part of yet another example of leading-edge innovation and research. This will allow us to continue to build Canada's healthiest population."

The institute's future home is the Health Research Innovation Centre (HRIC), adjoining the U of C medical school on the Foothills Hospital site. HRIC is currently under construction, slated for opening in 2005.

"This revolutionary concept drives research towards meeting the clinical needs of people suffering from debilitating diseases of the brain," says Samuel Weiss, PhD, Director, Hotchkiss Brain Institute. "Our institute has enormous potential to revolutionize treatments for neurological and mental illnesses."

Hotchkiss manages his own oil, gas, real estate and agricultural enterprises and is the president of Spartan Holdings Ltd.

Born in Tillsonburg, Ontario, he graduated from Michigan State University with a BSc in geol-



Harley Hotchkiss: "We are on the verge of medical breakthroughs that many of us would never have imagined." / Photo by Ken Bendiksen

ogy after serving in the Canadian Merchant Marine during the Second World War. He has spent his entire working career in Calgary.

He is a member of several professional societies relating to petroleum and mineral exploration, is a member of the Canadian Petroleum Hall of Fame, and has served on a number of corporate boards. He is chairman of the board of trustees of the Alberta Heritage Foundation for Medical Research and is past chairman of the Foothills Hospital Board.

He is also a director of the Hockey Hall of Fame and NHL Governor for the Calgary Flames. Hotchkiss is an Officer of the Order of Canada and holds an Honorary Doctor of Laws degree from the U of C as well as an Honorary Doctor of Science degree from Michigan State University. He was awarded the Alberta Order of Excellence in 1998.



Sam Weiss, Director, Hotchkiss Brain Institute, says the new centre has potential to revolutionize treatments for neurological and mental illnesses. / OnCampus files

Research tackles stroke, brain repair, spinal cord injury

Researchers at the Hotchkiss Brain Institute include:

Wee Yong

Dr. Wee Yong's research interests lie in the area of neuroimmunology and regeneration of the brain and spinal cord. His scientific projects have been guided by three diseases: multiple sclerosis, spinal cord injury and malignant gliomas. A particular goal is the provision of new therapies for these diseases, so that recovery can occur.

Dr. Michael Hill

Dr. Michael Hill is a member of the renowned stroke team

at the University of Calgary Faculty of Medicine which is striving to develop clinical tools that will help physicians diagnose and manage stroke with clot-busting drugs. Hill's research interests include acute stroke thrombolysis using intravenous or intra-arterial methods, stroke due to cervical artery dissection, and patterns of stroke onset - the diurnal, weekly, yearly and supra-annual variation in stroke.

Dr. Richard Frayne

Dr. Richard Frayne is interested in developing medical imaging strategies, particularly

the application of magnetic resonance (MR) imaging to the study, diagnosis and minimally invasive treatment of vascular disease. He is a Canada Research Chair in Image Sciences and an Associate Professor of Radiology and Clinical Neurosciences at the University of Calgary, and a Scientist at the Seaman Family MR Research Centre, Calgary Health Region (see www.mrcentre.ca). Through the Brain Institute, he is also very active in developing a molecular imaging program, that will use techniques such as MR spectroscopy and novel imaging agents,

to provide new information about health and disease processes at the level of molecules.

Zelma Kiss

Dr. Zelma Kiss' interests focus in three areas: Mechanisms of action of therapeutic deep brain stimulation (DBS); clinical trials of surgery for movement, pain and psychiatric disorders; and stereotactic radiosurgery. Her team's research aim is to understand how therapeutic brain stimulation works. DBS electrodes are placed in various deep brain nuclei for the treatment of movement disorders (essential tremor,

Parkinson's disease, dystonia) and pain (epilepsy and obsessive-compulsive disorder are still under investigation). The clinical benefits of DBS are well recognized for movement disorders, however its mechanism of action is unknown. In the future with a better understanding of how it works at the cellular level, DBS may be applied to other brain nuclei to treat other neurologic and psychiatric conditions.

Quentin Pittman

Dr. Quentin Pittman's research focuses on how brain circuits are organized to regulate internal body functions

such temperature, blood pressure and hormonal balance. In addition, his lab studies how the brain changes during pregnancy and lactation and how fever in newborns can affect brain function in adulthood. Within the Brain Institute, Dr Pittman and other members of the Education Committee have special responsibility for new initiatives in training the next generation of neuroscientists and will work closely with existing clinical, graduate and post graduate training programs to facilitate translational research training opportunities.

'Answer man' probes bug queries

By Erin Carpenter

When Erwin Buchner was helping a friend in Airdrie move, he stumbled across the biggest spider he'd ever seen.

"In the back of their house they had a big wooden shed," he says. "We moved it around and we saw this spider's web underneath and this big spider hanging off it. The spider's back looked like the size of a hazelnut."

When he looked at it more closely, Buchner was even more startled.

"On the back of it, there was a shape almost like a cat's face," he says. "The eyes, the pupils looking right at you with a menacing look, and there was a nose that was kind of cat-like."

Buchner and his friend captured the spider using Styrofoam cups, which they taped together. Buchner made a new home for it in his Calgary kitchen, using a plastic container with soil, twigs and leaves. He wasn't sure he'd done the right thing.

"Should I even have

it in the house?" he remembers thinking. "Is this a nasty species here?"

With the help of the Calgary Zoo, Buchner tracked down Rob Longair, who's fast gaining a reputation as University of Calgary's "Answer Man" for insects and spiders.

Longair is an entomologist in the Faculty of Science. His role as public consultant evolved gradually over the course of his 14 years at the university.

Longair says he's taken many calls recently from people worried about the so-called "cat-faced spider," also known as the Jewel Spider or Orb Weaver because of the traditional hub-and-spoke shape of its web. "All they want to hear is that this is not something that will invade their house and take over, destroy their clothes, or bite them in their sleep," he says. "We know of about two people who have been bitten by these things, and all it did was raise a red welt for 24 hours."

Longair asked Buchner to email him

photos of his mysterious spider.

"He replied within an hour with a big explanation and all kinds of information and a couple of websites," Buchner says. "It was good."

Longair fields up to five calls a day about creatures such as large Sphinx moths, Box Elder bugs and wasps. It's a time-consuming job, but he says it's worth it.

His efforts won him the Award of Excellence in Community Outreach from the Dean of Science, Dr. Michael Boorman.

"We want to give back to the community," Boorman says. "There are few experts in entomology. Rob has the right combination of availability, willingness and expertise to help the community."

So what became of Erwin Buchner's Orb Weaver spider? He took it to his kids' school, where it fascinated the science students.

"They thought it was so cool," Buchner says. "A couple of kids have brought spiders in now and they're getting into talking about spiders."

For more information and photos, go to the Provincial Museum of Alberta's website: www.pma.edmonton.ab.ca/natural/insects/bugsfaq/jewelspd.htm or visit Rob Longair's homepage: www.ucalgary.ca/~longair/



Rob Longair says he's taken many calls recently from people worried about the so-called "cat-faced spider," also known as the Jewel Spider or Orb Weaver. "All they want to hear is that this is not something that will invade their house and take over."

/ Photo by Ken Bendiktsen

LEARNING AND U

Love of acting propels prof to front of class

By Colleen Turner

A love of acting runs through Michael Boyes' blood.

There are several actors in his family, including a brother who performed Shakespeare at the Stratford Festival and a sister who is the director of drama at the Museum of Civilization in Ottawa.

"I come by acting honestly," says Boyes, a veteran psychology professor with a flair for performing.

That's not a bad thing when the psychology professor finds himself standing in front of a class of 400 first-year students trying to teach them about a concept known as sensory threshold.

"There is a sense that students are looking to be entertained. But I look at that positively. They are looking to be engaged," says Boyes. "The challenge is that some of this information is boring."

To make the potentially boring concept of sensory threshold more interesting, Boyes combines his interest in acting with his knack for storytelling.

"When I talk about sensory threshold,



Michael Boyes: "There is a sense that students are looking to be entertained." / Photo by Ken Bendiktsen

students could say 'Who cares,' but then I tell them that the minimum threshold of what a person can feel is a bee wing dropped from two centimetres onto a cheek. Then suddenly, things are interesting."

Boyes' goal when offering first-year students an overview of psychology is to engage them in thinking about how psychologists

think about the world. Rather than attempting to "fill them up with information," he tells them about the characters of the psychology world. "I tell them about Freud. Now that was an interesting fellow with a lot of problems. He probably could have used someone to talk to."

Boyes has received two Students' Union

Teaching Excellence awards since joining the University of Calgary in 1986. He teaches Principles of Psychology (205) and Development Psychology (351). On occasion, he teaches a fourth-year cognitive development course. He is also chair of the ethics committee and conducts his own research, primarily in the area of child development.

Most recently, he's involved in a study looking at the impact of an early intervention home visitation program.

Despite the large class sizes of his courses, Boyes says he tries to make one-on-one connections with students.

"It's a conversation, even if it's not a direct conversation with every person in the class."

Boyes, who started his undergraduate career as a physics and math major before switching to psychology, says he wants to teach his students to be critical consumers of information by giving them a knowledge base, but also perspective.

"I want them to come out of class knowing how to approach big issues."

Learning and U is a regular feature profiling excellent teaching.

Honorary degree recipients named

By Greg Harris

University of Calgary Chancellor Bill Warren has announced that Murray Edwards, one of Canada's leading business figures, and Diana Nickle, philanthropist and volunteer, will be the honorary degree recipients at November 12 convocation ceremonies.

The two will receive honorary doctor of laws degrees in separate ceremonies - Edwards at 9:30 a.m. and Nickle at 2 p.m. - in the Jack Simpson Gymnasium. They will be the 314th and 315th honorary degrees the university has conferred in its 38-year history.

Edwards is president and owner of Edco Financial Holdings, a co-owner of the Calgary Flames, and a leading investor in and a managing director and executive chairman of numerous publicly traded companies.

Aside from his business endeavours, Edwards has made significant contributions to the quality of cultural and intellectual life in Western Canada. Described as a patient and visionary man, he actively serves on a number of boards and supports many worthy causes in Calgary.

He established the N. Murray Edwards Market Information Centre in the Haskayne School of Busi-

ness, which provides realtime financial information for business students and faculty.

Nickle has focused her volunteer efforts and support in two areas: people in need, through her work with the Cathedral Church of the Redeemer and the Boy Scouts of Canada; and museums, through her support of the Museum of the Regiments, the MacDougal Church and The Nickle Arts Museum. She has helped create historical and archival institutions, which are essential for the education of Calgary students and the nurturing of a sense of common culture and heritage.

The Nickle Family Foundation, of which she is president, established the Nickle Arts Museum as well as a three-year assistant professorship at the U of C in Museum and Heritage Studies.

During November's ceremonies the university will also honour two members of the University of Calgary community with the Order of the University of Calgary. They are Kevin Douglas, a graduate student and dedicated executive member and volunteer of the Graduate Students' Association, and Susan Farmer, a longtime administrator in the Department of Drama.

Help available for stressed students

By Donna Gray

Struggling through the rigours of university can involve much more than stress, macaroni and cheese and late nights.

It can also mean dealing with feelings, thoughts and actions that sink a person into a deep state of despair they can't seem to shake.

That's exactly what happened to "Judy" (not her real name) in her first year of university. As she began her second semester, her parents noticed she was staying in her room for extended hours, never socializing and writing strange notes. It wasn't until her suicide attempt that they realized she needed help. She ended up connecting with the Early Psychosis Treatment Service (EPTS) at Foothills Hospital.

"My thoughts just wouldn't slow down. I couldn't concentrate on my studies, I failed a test and I was hallucinating — hearing things, and thinking my classmates and acquaintances were talking about me. My mind was making up a bunch of problems that didn't exist," she says.

Dr. Donald Addington, clinical medical director of EPTS, says many people Judy's age can have symptoms, but do not recognize the nature of the problem. That's where a simple referral from faculty, friends and family can make a difference.

"The university has a high-risk population as most people who have a first episode of psychosis are between the ages of 16 and 27. That's why we're advertising the program in the university's daytimers about the program. The insert tells people that they can check whether they have a potentially dangerous mental health situation with a simple test online at our website www.thesoonerthebetter.ca, or a phone call," he says.

Psychosis is a treatable medical condition that stems from changes in the brain's daily functions. The signs of psychosis are subtle: confused thinking, false beliefs, changed feelings and behaviour and even hallucinations. It can then lead to more dangerous thoughts and behaviours, even acts of harm, including suicide.

Psychosis is preceded by a variable period of less specific symptoms known as the prodrome. There are a number of disorders known as the schizophrenia spectrum disorders. These include schizophreniform disorder, that lasts from one to six months and schizophrenia itself, which may stay for a lifetime. There are a number of known risk factors for schizophrenia including genetics, perinatal trauma, viral infections during preg-



Dr. Don Addington says many people can have symptoms of early psychosis but be unaware of the problem. / Photo by Ken Bendiktsen

Six-week slump is near

The six-week slump is fast approaching for students, and like clockwork for many, mid-term anxiety sets in, funds run out and reality hits. It's this combination of stressors that can cause some to buckle.

The University of Calgary offers a wide range of counselling assistance to students experiencing everything from homesickness, test anxiety, to mental health issues such as early psychosis.

Sharon Crozier, director of the U of C's Counselling Centre, says the service caters to the specific needs of students. "For example, full academic accommodation can be found at the Disability

Resource Centre. As well, for students who get very tense while writing tests, counsellors or doctors can work with the professor to arrange for short-term accommodations. If things get really serious and it's after hours, the Distress Centre has a Mental Health Crisis Team that will go wherever the student is located."

Contact info: Counselling Centre, 220-5893, Room 375 - MacEwan Student Centre, University Health Services, 220-5765, Room 370 - MacEwan Student Centre or visit www.ucalgary.ca/counseling. After hours help is also available from the Distress Centre/Mental Health Crisis Team at 266-1605.

nancy, and marijuana use in early adolescence.

Sherri Gussman, a case manager with EPTS, says her role is to help patients understand their condition and link them to programs or services to assist them in managing work, school and accommodations.

"EPTS is a three-year program that allows for patients to function at their own level and heal at their own speed and looks at moving people onto the rest of their life. We work closely with family doctors to educate them about the programs and

groups that participants can access for education and recovery services."

Success rates so far have been impressive. With an average of 200 patients referred to the clinic each year, the duration between diagnoses to treatment is among the lowest in the world. The program has reduced attempted suicide and suicide rates, decreased relapses and stress and improved quality of life.

For Judy, now 21 and in her fourth year at U of C, her best advice for helping friends or family showing

symptoms of early psychosis means paying attention to the details.

"Just watch to see if the person is withdrawing from you, not socializing, just sitting in their room and not taking phone calls. You might think the person is a little down but it can escalate into something more. Even if it's for a few days, you need to help the person deal with it."

For more information on the Early Psychosis Treatment Service visit www.calgaryhealthregion.ca/mh/EPTP/epp/ or call 944-4836.

WHO ARE U?



Adam Sisler

University Club Events Coordinator

How long have you worked at the University Club?

I've been here seven years. My mother and I had a bed and breakfast in Southern Ontario before that. Business was good in the summer but not so great during the winter. So we sold it, went to Mexico for four months while Mom did some research for a book she was writing and then, hearing that Calgary was a booming place, we moved here.

What do you like most about your job?

I like the atmosphere of the club. It's a quiet place: a place where people can come to relax a bit. It's a gathering place for all sorts of different people - faculty members, staff, retirees, Senate members and VIPs.

VIPs?

Gorbachev was here when he visited the university about five years ago. John Ralston Saul. The President of Mexico. Timothy Findley.

How many members are there?

Right now there are about 850 members. On top of that, many departments also maintain memberships for their functions.

What's your busiest time?

Lunch. We have 25 or 30 people in the formal dining room each day. And that can go up to 50 or 60. And then for the buffet we have another 50 or 60. You never know how many people will show up. There doesn't seem to be any pattern to it.

What's the toughest part of the job?

Some weddings can create problems because they sometimes want a personal touch to the reception

and it can be difficult to find everything they ask for.

Do any off-campus groups use the club?

Oh, yes. We have wedding receptions, Christmas parties and the like. But all off-campus groups have to be sponsored by a member.

Do you work many evenings or weekends?

I'd say that I work about one-third of all weekends and about three out of every five evenings. The hours can be long but every day is a little different so it never gets boring.

What do you do in your spare time?

I do quite a bit of reading. I jog and swim. I like to travel and I do a fair amount of that. The club is closed for two weeks each year and I usually take off somewhere. This year I went down to San Francisco.

What are you reading now?

Conrad Black's biography of Roosevelt.

What's your favourite movie?

The original Thomas Crown Affair with Steve McQueen and Faye Dunaway.

What would you be doing if you didn't work here?

I'd probably be running a small business in Mexico - I enjoy Mexico very much - or Baja California. But I have no plans in that area - I quite enjoy what I'm doing now.

Story and photo by Ken Bendiktsen

Who are U is a regular feature highlighting the work of campus staff.

Advertising booking deadlines:

For Oct. 22 issue - Oct. 15

For Oct. 29 issue - Oct. 22

For Nov. 5 issue - Oct. 29

UNLOCKING BURIED OIL RESERVES

Stories by Mark Lowey

The challenges are huge but the prize is enormous.

The Alberta Ingenuity Centre for *In Situ* Energy, an initiative of the University of Calgary's Institute for Sustainable Energy, Environment and Economy (ISEEE) is leading a bold new program that promises to transform Alberta's oil sands industry and make Canada a global powerhouse in clean energy.

The initiative, which received major funding this week from the Alberta Ingenuity Fund, is the focus for a revolution in the way the oil sands are produced to create commercial fuels and spin-off products, such as petrochemical feedstocks.

"It requires a lot of research and a big effort, but the University of Calgary is very well placed to do this," says Dr. Pedro Pereira-Almao, Professor of Chemical and Petroleum Engineering and an Alberta Ingenuity Fund (AIF) Scholar. He and fellow AIF Scholar, Dr. Steve Larter, are leading the new centre and R&D initiative.

"Essentially, we're trying to develop technology for creating a whole new set of processes for recovering the energy from the oil sands in a clean way and avoiding the environmental impacts," says Larter, the U of C's Canada Research Chair in Petroleum Geology in the Department of Geology and Geophysics.

Alberta's 175 billion barrels of established oil sands reserves make Canada one of the top two countries in terms of

proven or economically recoverable crude oil reserves. And the total oil sands resource in place for potential recovery is even more immense – an estimated 1.6 trillion barrels, according to the most recent figures from the National Energy Board.

There's just one problem. Ninety-three percent of this vast energy source is locked in bitumen deposits too deep underground to be mined at the surface. So other methods must be used to coax the molasses-like bitumen, the "raw" heavy crude oil, to the surface.

Industry now does this "*in situ*," or in place in the reservoir, by drilling wells into the bitumen deposit, then injecting steam underground. The hot steam loosens the bitumen so it flows into a horizontal well and can be pumped to the surface.

Dr. Roger Butler, U of C professor emeritus of Chemical and Petroleum Engineering, invented this technology, called Steam Assisted Gravity Drainage or SAGD (pronounced SAG-D). It unlocked billions of barrels of oil sands that otherwise would have been inaccessible.

However, huge amounts of natural gas or methane – a high-priced, clean-burning fuel – must be burned to generate the steam required for SAGD. "It's not a very energy efficient process," Larter notes. "You use high-quality fuel, methane, to produce a low-quality fuel, bitumen."

Once the bitumen is pumped to the surface, it has to be diluted by

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We want to make more energy-efficient processes and better-quality products, reduce the amount of waste, and enhance the quality of fuels produced.

– Dr. Pedro Pereira-Almao

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adding other oil and gas products so it can be transported by pipeline. Then, this heavy oil must be refined in upgrader plants into light synthetic crude oil, typically through thermal-cracking – cooking the bitumen at high temperatures. This requires still more energy and produces large amounts of waste residue called petroleum coke.

"This 'brute force' approach is clearly not sustainable, because of the inefficient energy use and environmental impacts," Pereira-Almao notes.

One of the main R&D thrusts of the new Alberta Ingenuity Centre for *In Situ* Energy will be to develop advanced



Dr. Pedro Pereira-Almao, U of C AIF Scholar: "We want to do research that transforms

chemical catalysts to speed up the chemical reaction during upgrading. "We want to make more energy-efficient processes and better-quality products, reduce the amount of waste, and enhance the quality of fuels produced," Pereira-Almao explains.

Along with the anticipated Alberta Ingenuity Fund support for the new centre, the Alberta Energy and Research Institute (AERI) has contributed almost \$900,000 over three years in separate funding to Pereira-Almao and U of C colleague Dr. Josephine Hill, Assistant Professor of Chemical and Petroleum Engineering, for projects in advanced catalysis.

"This is an extremely important area for us," says Eddy Isaacs, AERI's managing director, who calls catalysis a "platform technology." In addition

to reducing energy use in oil sands and heavy oil recovery and upgrading, advanced catalysts can also be employed in other sectors, such as developing clean coal power plants and producing petrochemicals, Isaacs says.

The other major thrust of the new U of C centre is sometimes called the "holy grail" of clean energy research and technology development.

The ultimate goal of ISEEE's multidisciplinary, mission-focused research team, along with public and private sector partners, is to develop novel methods and technologies for doing some or even all of the oil sands upgrading underground – right in the reservoir where the bitumen is located.

Imagine being able to tap Alberta's immense oil sands resource

without digging up the landscape, or using large volumes water to make steam, or burning dwindling natural gas supplies, or emitting greenhouse gases like carbon dioxide.

Through developing an advanced catalyst that could be injected directly into the reservoir, "we would make a chemical reactor down there, right in the hole," Pereira-Almao says.

The aim is to create a controlled chemical reaction that brings to the surface only the valuable energy products, such as already upgraded oil, methane gas, petrochemical feedstocks and, eventually, hydrogen. At the same time, all the unwanted byproducts – metals, sulphur, coke and carbon dioxide – would be permanently left behind underground.

"Within five years, we hope to be doing

ISEEE Timeline

1974
Government of Alberta launches Alberta Oil Sands Technology and Research Authority (AOSTRA) to fund research to make oil sands economically feasible.

Late 1990s
AOSTRA has achieved its mission and is winding down. The Government of Alberta challenges the Alberta Science and Research Authority to develop an energy innovation and

research strategy for the period to 2020.

August 2000
The Alberta Energy Research Institute (AERI) is established. AOSTRA is dissolved and its assets are transferred to AERI. AERI's mandate is to promote energy research and technology evaluation and transfer in strategic areas, including oil and gas, heavy oil and oil sands, coal, electricity, renewable and

alternative energy.

October 2001
AERI releases first draft of Alberta Energy Research Strategy. November 2001 Discussions begin with the National Research Council of Canada to develop an institute at the University of Calgary focused on sustainable development and alternative energy.

April 2002
U of C adopts an Academic Plan, Raising Our Sights, which establishes "Leading Innovation in Energy and the Environment" as one of four strategic priorities and an area where the university has potential to reach international pre-eminence.

September 2002
U of C establishes a steering committee and a working concept called the "National

Institute for Sustainable Energy, Environment and Economy" or "NISEEE" (later shortened to ISEEE) to implement its energy and environment initiative.

October 2002
U of C meets with key leaders from the energy industry, AERI, and the provincial government to seek input and engage the energy sector in the planning of the energy, environment and economy initiative.



Industry as well as supports it."

something completely different," Larter says. "If we added another one-percent recovery of bitumen, even a modest one percent, that's equal to the whole recoverable oil reserves of the North Sea."

The U of C has built an experienced advanced catalysis group around Pereira-Almao since recruiting him from PDVSA-Intevep in Venezuela, where he co-invented several major upgrading technologies. Adding Larter, from the University of Newcastle upon Tyne in the U.K., gives the U of C one of the world's leading experts in the origin and chemical makeup of fluids in oil reservoirs.

The principal investigators for the research also include Drs. Larry Lines, head of Geology and Geophysics, and Brij Maini and Gordon Moore from Chemical and Petroleum Engineering. Moore and his

department colleague, Dr. Raj Mehta, are internationally recognized leaders in *in situ* combustion techniques. It will be their job to create a controlled burn in the bitumen reservoir, to generate the temperatures and other conditions needed to make the underground reactor work.

Maini is an expert in heavy oil recovery, including SAGD and the VAPEX technology that uses solvent instead of steam to recover oil sands bitumen. Lines is an expert on geophysical imaging.

Delineating and characterizing the structure and chemical makeup of oil sands reservoirs before creating an underground chemical reaction will be crucial. This is where U of C researchers like Lines, along with Drs. Rob Stewart, Apostolos Kantzas, Donald



Dr. Steve Larter, U of C AIF Scholar: "There's also a role for education, to educate the next-generation energy industry." / Photos by Shannon Oatway

Lawton, Tony Settari and others with significant strengths in advanced seismic imaging, geostatistics, geochemistry and geology will play a vital role.

Other participants include Dr. Tom Harding, head of Chemical and Petroleum Engineering, Dr. Josephine Hill and Drs. Raj Mehta, Cynthia Riediger, Ronald Spencer and Harvey Yarranton.

The U of C's new centre received several letters of support from the oil and gas industry, including one from Gwyn Morgan, president and CEO of EnCana Corp. He envisions the centre, backed by both public and private sector funding, taking the leading role in doing the R&D necessary to maintain the oil sands sector's continuous improvement in energy use and environmental

performance, and to potentially make the breakthrough that will transform the sector. "Given my overall support for ISEEE in the first place, this seems to be one of the ideal things we should be doing together," says Morgan, a member of ISEEE's Leadership Board.

Robert Mansell, ISEEE's managing director, says the Alberta Ingenuity Centre for *In Situ* Energy is exactly the type of collaborative, multidisciplinary and mission-oriented initiative that the one-year-old institute was intended to develop and champion. "The centre has the real potential to unlock an oil sands treasure worth trillions of dollars," he says. "It's an extremely important initiative, not just for ISEEE or for the university, but for the province and for the country."

A year in review: ISEEE moves ahead

The University of Calgary's Institute for Sustainable Energy, Environment and Economy (ISEEE) has made good progress in its first year but is looking to accelerate funding support and program development, says ISEEE's managing director.

ISEEE initiatives will have attracted more than \$10.5 million in external funding by the Institute's first anniversary at the end of this month, says Dr. Robert Mansell, who is also Special Adviser to U of C President Dr. Harvey Weingarten on Energy and the Environment. This includes major funding announced this week from the Alberta Ingenuity Fund, and almost \$1.8 million in funding awarded in the past year by the Alberta Energy and Research Institute (AERI). AERI's funding includes:

- \$777,900 over three years for two projects in advanced catalysis, led by Dr. Pedro Pereira-Almao in Chemical and Petroleum Engineering;
- \$265,680 to Drs. Tom Harding and Brij Maini in Chemical and Petroleum Engineering, to optimize well configuration in SAGD technology;
- \$272,800 to Drs. Raj Bishnoi and Brij Maini in Chemical and Petroleum Engineering, to investigate carbon dioxide sequestration using gas hydrates (ice-like deposits of methane gas);
- \$198,900 to Dr. Rob Stewart, Director of CREWES (Consortium for Research in Elastic Wave Exploration Seismology) in Geology and Geophysics, for seismoelectric exploration for hydrocarbons and monitoring of producing oilfields;
- \$150,000 to Dr. Naser El-Sheimy in Geomatics, to develop a next-generation MEMS-(microelectromechanical system)-based surveying system for oil and gas drilling operations;
- \$120,000 to Drs. Josephine Hill and Pedro Pereira-Almao in Chemical and Petroleum Engineering, to test "ring-opening" catalyst for hydrocarbons

recovery and upgrading.

AERI has also contributed \$500,000, as part of a larger funding request, toward the Western Canadian Fuel Cell Initiative, championed by Dr. Martin Kirk, Director of Research Services and Associate to the Vice-President (Research and International), and co-chaired by fuel cell researchers Dr. Viola Birss, Professor of Chemistry at the U of C, and Dr. Karl Chuang at the University of Alberta.

In August, Alberta Energy announced a \$1-million government grant to ISEEE. The money will be used to further research, in partnership with AERI, other universities and the oil and gas industry, in several key areas, including:

- advanced hydrocarbons recovery and upgrading (*in situ* oil sands, conventional oil and gas, and unconventional gas)
- carbon dioxide and water management;
- energy and environmental systems modeling, integration and policy;
- electricity: a new export industry;

Mansell says there are also plans, pending funding from Alberta Infrastructure, for a new research and technology development facility on campus, to be built in three modules each costing about \$50 million.

The 600,000-square-foot building would house the National Institute for Sustainable Development Technologies, being proposed in conjunction with the National Research Council of Canada, as well as provide space for various energy and environment multidisciplinary teams and expansion of programs in Engineering and other faculties.

The plans also include space for related institutes and centres that would benefit from being close to the U of C, both in terms of synergies and increasing their participation in the university's research and education activities.

January 2003

AERI launches a National Challenge Dialogue to bring together industry, research and government players to engage diverse stakeholders, to develop a collaborative plan to meet the key energy and environment challenges.

February 2003

U of C organizes a workshop involving over 100 faculty and researchers from across

campus to develop a research inventory and identify research groups working in energy- and environment-related areas to further define areas of research focus and to identify areas where the university can play a leadership role and contribute.

April 2003

U of C identifies four main areas of research focus from the Alberta Energy Research Strategy where the university is well-

positioned and prepared to provide leadership:

- Alternative Energy
- Advanced Recovery and Upgrading
- CO₂ Management
- Water Management

U of C realigns existing resources and commits new resources to these priorities.

October 2003

The U of C appoints Dr. Robert Mansell, Special Adviser to the President on Energy, Environment and Economy and Managing Director, to

lead the Institute for Sustainable Energy, Environment, and Economy (ISEEE) at the university. The Alberta Ingenuity Fund announces funding of up to \$7.5 million over five years to create the Alberta Ingenuity Centre for Water Research, a collaboration by the University of Lethbridge, University of Calgary and University of Alberta.

February 2004

The U of A, U of C, and U of L sign a Memorandum of Understanding to promote coordination and collaboration in research and education related to the implementation of Alberta's energy and environment strategies.

March 2004

Initial members of ISEEE Leadership Board announced and ISEEE website launched.

Throughout 2004

AERI invests more than \$1.78 million in ISEEE in strategic project areas.

August 2004

Alberta Energy contributes a \$1-million government grant to ISEEE and its research partners.

October 2004

Alberta Ingenuity Fund contributes major funding for the U of C-ISEEE *In Situ* Recovery and Upgrading Centre

Creating the knowledge for a better future

By Claire Morris

“Much of our economic challenge can be summarized in two words: knowledge and innovation. These are the new raw materials of the 21st century economy. They are the key to a country that can race forward when the global seas are calm, and ride out the rough weather safely when they are not. Innovation and knowledge are two sides of the same coin – the true hard currency of the future.”

Those stirring words were spoken by then Finance Minister Paul Martin in his budget speech of February 1999 – and he was right. What’s more, the federal government has backed those words with concrete action. Since 1997 the government has invested substantially in knowledge creation through increased funding to the federal research granting agencies and by setting up a number of key programs such as the Canada Foundation for Innovation, the Canada Research Chairs, a permanent program to fund the indirect costs of research, and increased financial support to graduate students. This has been a bold and coherent strategy.

It would be hard to overstate the impact that these programs have had on Canada’s universities – which conduct more than one-third of all research in this country. There’s a new energy and vitality on our campuses, and a growing recognition from other countries that Canada is a major player in research. University researchers and their students are being given the tools they need to explore and expand the frontiers of knowledge, and to apply that knowledge to the benefit of Canadians. We’re keeping our best and brightest here, bringing Canadians back home, and attracting international stars from abroad. This is no small stuff, and we can all be proud of these achievements.

Now, as the federal government embarks on a new session of Parliament, it is already signaling some major priorities – notably health care, equalization, child care and our cities.

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Investments in knowledge do have a price – we estimate that universities have received roughly \$9 billion in federal research funding since 1997. Canadians have a right to ask what they’re getting for their money.

– Claire Morris

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These priorities are worthy. They will also be tremendously expensive. At the same time, a cabinet sub-committee is looking at reallocating \$12 billion over the next several years from “lower” to “higher” government priorities.

Against that backdrop, it’s important to keep in mind that higher education and research remain vital investments. A key to wealth generation, and hence our ability to pay for government programs, is a highly educated population and a strong university research sector.

University-based research infuses and informs all aspects of our lives. It tells us who we are, where we’ve been, and where we want to go as a society. It explains the world around us, from the shape of the environment to the structure of our communities. It improves our understanding of the physical universe and of the nature of culture, conflict and disease. And it’s not just good for the soul, but good for the bottom line: knowledge leads to innovation, which improves economic well-being.

These investments in knowledge do have a price – we estimate that universities have received roughly \$9 billion in federal research funding since 1997, most of that flowing through the research granting councils. Canadians

have a right to ask what they’re getting for their money. Universities collectively accept that responsibility and, through the Association of Universities and Colleges of Canada, are documenting their contributions and the value of these investments.

Knowledge creation and its application is a long-term process. Developing the products and processes of new knowledge and bringing them to market takes time. Even so, in just the two-year period of 1999 to 2001, the income generated from the commercialization of university intellectual property more than doubled, and new patents were up by 40 percent.

Universities transfer their knowledge in many other ways as well, including through public policy development, community service, expert commentary, and partnerships with industry and other sectors. And let’s not forget their most important knowledge transfer activity – producing Canada’s graduates, the highly skilled and adaptable individuals who will shape our social and economic future.

In another budget speech, in December 2001, Mr. Martin stated that the breakthroughs involved in creating new knowledge don’t happen by chance, but “through substantial and dedicated



Claire Morris

effort.” He was right again. With sustained support by the federal government, Canada’s university researchers are making it happen.

Claire Morris is the president of the Association of Universities and Colleges of Canada. From February 1999 to May 2002, she was federal co-chair of the deputy minister committee on post-secondary education. This piece was first published in the *Ottawa Citizen*, Sept. 29, 2004.



Dr. Peter Hackett
President and CEO

The Alberta Ingenuity Fund’s Board of Trustees is pleased to announce the appointment of Dr. Peter Hackett as President and CEO.

Dr. Hackett is an internationally recognized research leader and chemical physicist, and former Vice-President (Research) at the National Research Council of Canada (NRC). He was the lead NRC executive behind the creation and design of the National Institute for Nanotechnology (NINT) at the University of Alberta, and a member of the Board and of the Executive Committee of iCORE (the Informatics Circle of Research Excellence), based in Calgary.

Dr. Hackett is a Trustee of the Steacie Foundation, and has been an Adjunct Professor in Chemistry at the Universities of Toronto and Saskatchewan. He is also a member of the Institute Advisory Board of the CIHR Institute of Genetics.



albertaingenuity.ca

OnCampus welcomes opinion columns, commentary and letters. Please send submissions to colleen.turner@ucalgary.ca.

Talk focuses on Scrolls

By Gail Corbett

George Brooke, one of the world’s top researchers on the Dead Sea Scrolls, visits Calgary Oct. 26 and 27 as the 2004 Peter Craigie Memorial Lecturer in the Faculty of Humanities.

Brooke gives a free

public lecture at the Nickle Arts Museum on Wednesday, Oct. 27 at 7:30 pm, in which he presents the latest research on the Dead Sea Scrolls. The lecture explores the ways in which new research reveals new thinking on the Bible,

Christianity and Judaism and it examines the ways in which new research might reinforce or undermine traditional religious stereotypes.

Brooke is the Rylands Professor of Biblical Criticism and Exegesis at the University of Manchester.

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Interview by Colleen Turner



Harold Esche wants the U of C to be a leader in the use of technology. / Photos by Ken Bendiktsen

“I’d like us to be seen as a leader in terms of how we are utilizing technology to meet our strategic goals. Not technology for the sake of technology, but to be recognized leaders in how we use technology to improve the teaching and learning environment and our research endeavours.”

– Harold Esche

You are the first U of C CIO. How did that come about?

Basically it came about because there is a realization that there is more and more dependence on technology at the university. We need somebody to try and pull all our different technology projects together into some kind of unified approach to what we want to do with technology on campus. It’s not unusual for a university of this size to head in this direction.

What are your main goals?

My first goal is to form a technology strategy for the U of C. We don’t currently have a university strategic plan for technology. Underneath that there are a number of areas that need to be addressed. Basically we have to get the appropriate technology in place to further our teaching and learning and research. One of the major projects within the area of teaching and learning is our course management system called Blackboard. I just got a stat this morning – 72 per cent of our students are enrolled in a course that uses Blackboard. Unfortunately that doesn’t mean the students are all necessarily actively using Blackboard. It means the instructor has enrolled the course in Blackboard. It’s being used in multiple ways - in some cases, only the course outline is on Blackboard.

But in other cases, the use of Blackboard is really integrated into the course. I think the 72 percent stat is pretty amazing given that we only started using Blackboard a year ago.

We are also focusing on research support. Obviously research is very important to us as an institution. And so from an IT perspective, it’s important we have the right services in place. Probably the best example is our high-performance computing. The University of Calgary is part of a consortium called WestGrid. We have some high-performance resources on campus, but more importantly, through this project all of our faculty members have access to all those resources throughout the West.

Administrative computing is another major area that we’re focusing on. Project E-Merge is a very, very significant project in terms of the scope and desired outcomes. It’s not just technology - it’s about changing the way we do our business processes so that we’re more efficient, more effective. Our mainframe computers are based on what was current 30 years ago.

The other big area is infrastructure. Infrastructure needs funding to install and funding to sustain. The best example of technology infrastructure is networking. Networking enables all the other technology services. The exciting thing we are doing right now around networking is our

movement to go wireless. We’ve done the whole faculty of EVDS. Engineering is just being completed, Haskayne School of Business is almost completed, and some other faculties have expressed interest.

The final key area is process and organization. How do we need to change the way technology is organized to help us do all these things? How does the central IT need to be organized, and how does that central group coordinate and work with technology units of other departments? Only about 50 percent of technology expenditure is from central office. The other half is spent by groups in various departments and faculties. We are very much in favour of a combination of centralized and distributed model, but what is important is that we have a model that is coordinated.

Why is it important for the university to become wireless?

There are many reasons. One of the main reasons is that with normal wired technology, you are very much tied down to a specific location. The idea is to open that up and provide mobility to people. It allows people to discover whole different ways to use technology. Students can walk around with their laptops and access their course materials wherever they chose. If we

continue down that path, you don’t have to be learning in a classroom. It also enables new teaching opportunities. Wireless networks open up learning environments and help permit inquiry-based, blended learning.

How many IT people are there on campus?

That’s a good question. I’m not sure that anyone actually knows the number. But we are probably looking at between 350 and 400 technology people on campus. One of my goals is to discover over the next year the distribution and skill set of all our technology people.

What is your history with the U of C?

I started in 1989 with a split position between the central IT group and the business school. It was a 50/50 job. In the business school I was doing the day-to-day support on desktops, labs and network architecture. In central IT I supported Multics (a precursor of UNIX) and PCs in teaching labs. It was a challenging job because of the two different sets of priorities and responsibilities, but it was also a really good job in the sense that I got to understand the technology requirements for faculty. I also taught management of information systems for a number of years. I was in that job four or five years, and then there was an opportunity for a

managerial position in academic computing services and I took on client services responsibilities. I managed that for another five years and then I became associate director of information technologies. Last year our former director left and I became acting director for a year. At that time, it was decided there should be a search for a CIO. I was successful in that process, and here I am.

What is your academic background?

I’ve got a couple engineering degrees - both a Bachelor’s and a Master’s from the University of Toronto. I’ve also got an MBA. The MBA is from the University of Calgary.

What are some of the areas where IT at the university needs to evolve or change?

As you look across campus in the area of technology support, you see a lot of duplication. There are a lot of cases where people are doing the same thing. For example, there are a whole variety of email systems, about 12. I’m not saying that necessarily we should only run one, but we need to look at if there are reasons we are running the additional ones. It’s the same with how we run labs. There are a lot of different people running labs and doing a lot of the same thing. Maybe one of the ways to improve on that is to have more coordination among the people who are doing labs. There is likely a better way for us to provide that service.

Where would you like the U of C to be in 10 years in terms of technology?

Obviously we can’t predict new technological advances, but because I’m a person who believes very strongly in the potential of technology, I’d like us to be seen as a leader in terms of how we are utilizing technology to meet our strategic goals. Not technology for the sake of technology, but to be recognized leaders in how we use technology to improve the teaching and learning environment and our research endeavours.

Do you ever get frustrated in your own life with technology?

I don’t usually get frustrated. For the most part, it doesn’t matter to me if my PC has problems. All I need is a web browser to access all the services I need. We shouldn’t be so dependent on our particular PC.

What kind of technology do you use in your daily life?

I’ve got a cellphone, I think I currently have three laptops. We have three computers at home, including one in my four-year-old’s bedroom. I have a PDA. I have a little GPS unit that goes with it. I have wireless in my house. I have cellular data services so I can get to the Internet wherever I may be. I’m quite immersed in technology. I’m interested in technology, otherwise I wouldn’t be in this job. It’s a tool. It’s a tool like every other tool. I’m fascinated about how technology is going to be so much more pervasive than it is now. The question I find very interesting to explore is how technology will change our lives and the lives of our children.

Tourism professor receives accolades for lifetime work

By Natalie St-Denis

This will no doubt be one of Dr. Brent Ritchie's most memorable summers - he has just received three prestigious awards for lifetime contributions to research and education in the field of tourism.

Ritchie, chair holder of the World Tourism Education & Research Centre, was recently honoured with the World Tourism Education Ulysses Award for his scientific contributions to the theory and practice of tourism policy and for his overall leadership over the last 25 years of his career. Ritchie will also receive the 2004 Alto Ambassador Award from Travel Alberta in November. The award is for an exceptional Albertan who has made an outstanding contribution to the provincial tourism industry.

He also recently received the John Wiley and Sons Research Award from the Council on Hotel Restaurant & Institutional Education for his lifetime contributions to scholarship and research in hospitality and tourism.

Throughout his career



Brent Ritchie recently won three prestigious awards for lifetime contributions. / Photo by Ken Bendiktsen

at the Haskayne School of Business, Ritchie has been involved as an adviser and researcher on impact management of large events, such as the 1988 Winter Olympic Games in Calgary.

"The Olympics had an enormous impact on the city, the international awareness of Calgary in Europe and the United States went up four to five fold," says Ritchie. "An event like this can really transform a destination."

Ritchie also lent his expertise by participating on a five-person task force for

the Banff Bow-Valley destination. The task force brought environmentalist and tourist proponents together to come up with a viable solution to provide tourists with a meaningful experience while respecting wildlife and fauna. "People love to see wildlife, so we proposed, for instance, to set up observation mechanisms, which allow people to watch animals without disturbing them."

Over the years, Ritchie has authored many books on tourism. His latest book

is titled *The Competitive Destination: A Sustainable Tourism Perspective*.

As an expert in tourism, he's done his fair share of traveling. The downside to his expertise, however, is that he can't be just another tourist enjoying the sights. "I can never enjoy vacations, I'm always walking around with a critical eye and thinking about what I am seeing and its implications for my next book," admits Ritchie.

Ritchie is quite excited about the future.

Not only is he starting new research projects, he is looking forward to collaborating with his son, Robin Ritchie, a professor of marketing at the Richard Ivey School of Business at the University of Western Ontario.

"As such, I'm not nearly ready for retirement yet," says Ritchie. "I'm now investigating the possibilities of poverty alleviation through tourism."

"I'm not convinced that tourism holds the complete answer to eliminating poverty but perhaps it can be a catalyst for change in some of the poorer regions of the world."

Stephen Peitchinis

PEITCHINIS Stephen Gabriel 1925 - 2004

Steve, despite several weeks in hospital, did not survive a massive stroke and died Sept. 22, 2004. He is survived by his wife, Jacquelyn, his brother Daniel and his wife Froska, their sons Christopher and Gregory, daughters Freda and Angela, and six grandchildren. Steve was born in Macedonia, Greece on Oct. 12, 1925. He attended elementary school in Greece, secondary school in Bulgaria and studied at the University of Sofia, Bulgaria from 1945 to 1949. He came to Canada in 1950 to join his family. He received a BA in 1954 and an MA in 1955 from the University of Western Ontario and a PhD from the London School of Economics in 1960. He taught economics at Western Ontario until he moved to the University of Calgary as Professor of Economics in 1968. From 1973 to 1976 he was Dean of the School of Business. He returned to the economics department

where he later became the head. Retiring in 1992, he did specific projects for the U of C as Professor Emeritus. Steve was a prolific scholar and wrote many articles and books on economics during his career. His curriculum vitae is listed in Canadian Who's Who 2000. Just before his illness, he had finished another book on the U.S. Economy 1960 - 2000. Steve was an ardent golfer and played his last 18 holes the day before the stroke. The family appreciated the excellent care that he received by the nursing staff and doctors at the Victoria General Hospital. If desired, donations may be made to the charity of one's choice.

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Centre speeds genetic research 'tremendously'

By Alexandra Venter

DNA analyses that just recently took weeks to months to complete are now accomplished overnight by computer-savvy U of C scientists with a powerful new tool.

Researchers at the Sun Centre of Excellence for Visual Genomics at the Faculty of Medicine say their software, together with a powerful new computer processor, are pushing genetic research in Canada into the fast lane. Centre director Christoph Sensen says the Paracel Genematcher 2 — the only processor of its kind in the country — speeds his research “tremendously.”

Genes, written in the four-letter language of DNA, are the molecular blueprints for the construction and operation of living things. The immense job of interpreting these blueprints — finding out what the vast lengths of DNA encode — is worth it, says Sensen, because this knowledge will allow scientists to tailor-make medicines for individuals based on their genes, better develop disease-resistant crops, and even identify the best cows in the herd for breeding low-fat beef cattle.

Paul Gordon, a PhD student in Sensen's research group, says the practical application of his work motivates him. “Here we are exposed to biologists with real problems all the time,” says Gordon. Last month, Gordon and Sensen made public their development of Osprey, software that sorts and interprets genetic data, and presents it to biologists in a form they can use. Bioinformatics, the use of computers to make sense of raw biological data, is a science in the making.

A computer science grad and self-taught in biology, Gordon says “Successful bioinformaticians need to be able to quickly grasp the concept (in which) biologists are interested, in order to effectively create solutions for them. If you treat the problem as a pure computational problem, the results often aren't usable in real lab situations.” One way to learn what a gene does is to find others like it. Tapping into DNA sequence databases, the biologist can search for similar

This knowledge will allow scientists to tailor-make medicines for individuals based on their genes, better develop disease-resistant crops, and even identify the best cows in the herd for breeding low-fat beef cattle.

gene sequences that may have known functions.

“Genes often have the same function whether they are in a fruit fly, or in a person,” explains Sensen. In other cases, the biologist wants to know which genes are entirely unique, and the Genematcher, says Sensen “doesn't miss anything.”

“It's a very challenging computing task to find all these things (in a timely manner),” he notes.

With the processing power of the Genematcher 2, Sensen's team can run sequence comparisons 1,000 times faster than anyone else in Canada. Funded in part by Genome Prairie and the Canada Foundation for Innovation, Calgary's Genematcher 2 is a resource for scientists worldwide. Researchers from Rockefeller University, New York, recently approached Sensen to analyze thousands of mouse genes. The U.S. scientists predicted it would take them over a year to accomplish the work — with the Genematcher 2, Sensen got the results overnight.

In the past year, Sensen has used the “über-calculator” to help researchers in 150 countries. In addition, the U of C team is putting important results on the Internet.

In time, Sensen would like to link analyses gleaned from the Genematcher 2 to a virtual model of the human body — a biological system that relies on 30,000 to 40,000 functioning genes. Sensen is leading the development of CAVE™, a computer system that reads and understands gene sequences, and models cell parts based on these genetic blueprints. This “interface” — a frontier where computer-speak becomes something people can relate to — is set up in a small room in the Sun Centre. Scientists need only walk into the virtual reality created by

CAVE™ to immerse themselves in, for example, the failing pancreatic cell of a diabetic.

In the meantime, Sensen is eager to follow up on a phone call he has just received: A group of crop scientists have 80 wheat genes they need analyzed. Time to rev up the old Genematcher — who knows what genes tomorrow will bring?



Bioinformatics guru Christoph Sensen gets ready to use the Genematcher 2, a super-computer capable of analyzing gene sequences faster than any other system in Canada. The roar of the machinery used to cool the system's 28,000 processors is deafening, but fortunately it will only take Sensen a few minutes in the heavily-secured basement lab to get the Genematcher started. / Photos by Ken Bendiksen



Team designs gene chip

When Gerrit Voordouw wanted bioinformatics expertise to help him unlock the secrets of an environmentally troublesome microbe, he went to Christoph Sensen. Voordouw, a U of C microbiologist, is trying to understand why the bacterium *Desulfovibrio vulgaris* is so effective at eating its way through oil and gas pipelines. Voordouw

Gerrit Voordouw holds a printout of the *Desulfovibrio vulgaris* genome.

had Sensen's team design a gene chip, a collection of probes that could be used to study when and which *D. vulgaris* genes are turned off and on. Using the Genematcher 2 to find stretches of DNA unique to *D. vulgaris*, Sensen and his colleagues turned out a probe-design in a day. Voordouw says this is type of design is typically “a pretty daunting task,” but Sensen's approach allows researchers to “cope with the huge explosion of information that is occurring.”



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7th Annual MATERIALS MANAGEMENT TRADE SHOW

Program exchanges ideas, researchers

By Kirk Thurbide

University of Calgary engineers are exchanging more than cowboy hats and lederhosen with their German colleagues.

An agreement that formalized a sister agreement between Alberta and the Free State of Saxony is also facilitating the exchange of ideas as U of C researchers meet with their counterparts from several technical universities.

Bioengineering researchers Drs. Günter Vollmer, Dieter Scharnweber, and Rainer Salzer from the Technical University of Dresden recently were in Calgary to visit with researchers from the Faculty of Engineering's Centre for Biomedical Research and Education (CBRE).

"We are very impressed with all of the facilities, our colleagues, and the collaborative atmosphere," said Vollmer, who was in town to explore the possibility of future research collaborations.

A second German contingent of energy and environment researchers also visited to discuss future collaborations.

Dr. David Keith is encouraged about the potential of such collaborations.

"We found that there were several areas where research collaboration seems to make sense, particularly in water resource management where this collaboration could help the City of Calgary imple-



Students Mallory Polach, Kiran Sharma, Chris Knobel, Sterling Greni (U.S. exchange student) and Kurtis Broeders are benefitting from a sister agreement between Alberta and the Free State of Saxony.

ment its new water management policy. Both institutions are building interdisciplinary programs in engineering, environment and the earth sciences and we found exciting opportunities to learn from each other's experiences in crafting such educational programs, programs which are vital to train young people to tackle today's complicated problems."

The formal agreement that created the relationship was signed by Premier Ralph Klein in early 2003.

U of C bioengineer Dr. Nigel Shrive said these exchanges help create enthusiasm among researchers from

both countries. "The meeting has really helped stir some very exciting new ideas for both sides. When you sit down and talk with someone who may be working on very similar things as yourself, but they come at it from a slightly different angle that you hadn't thought of - that's where new connections are made."

Students are also benefiting from the Alberta-Saxony agreement, through the student exchange program. In May, the Faculty of Engineering sent four undergraduate students - Mallory Polach, Kiran Sharma, Kurtis Broeders and Chris Knobel - to the Freiberg University of

Mining and Technology for a five-week program in Renewable Energy Technology.

During the five-week excursion, the students took a class in renewable energy, attended labs, and went on various field trips.

"On the field trips you can actually see how the things you've learned about in class are applied to real situations," said Knobel.

ADMINISTRATIVE NOTICES

Call for Nominations - President's Internationalization Achievement Awards 2004

The President's Internationalization Achievement Awards (PIAA) recognize the remarkable achievements of individuals - in our supportive community, and in Departments and Faculties across the institution - and programs that are dedicated to the sustainable internationalization of the University of Calgary.

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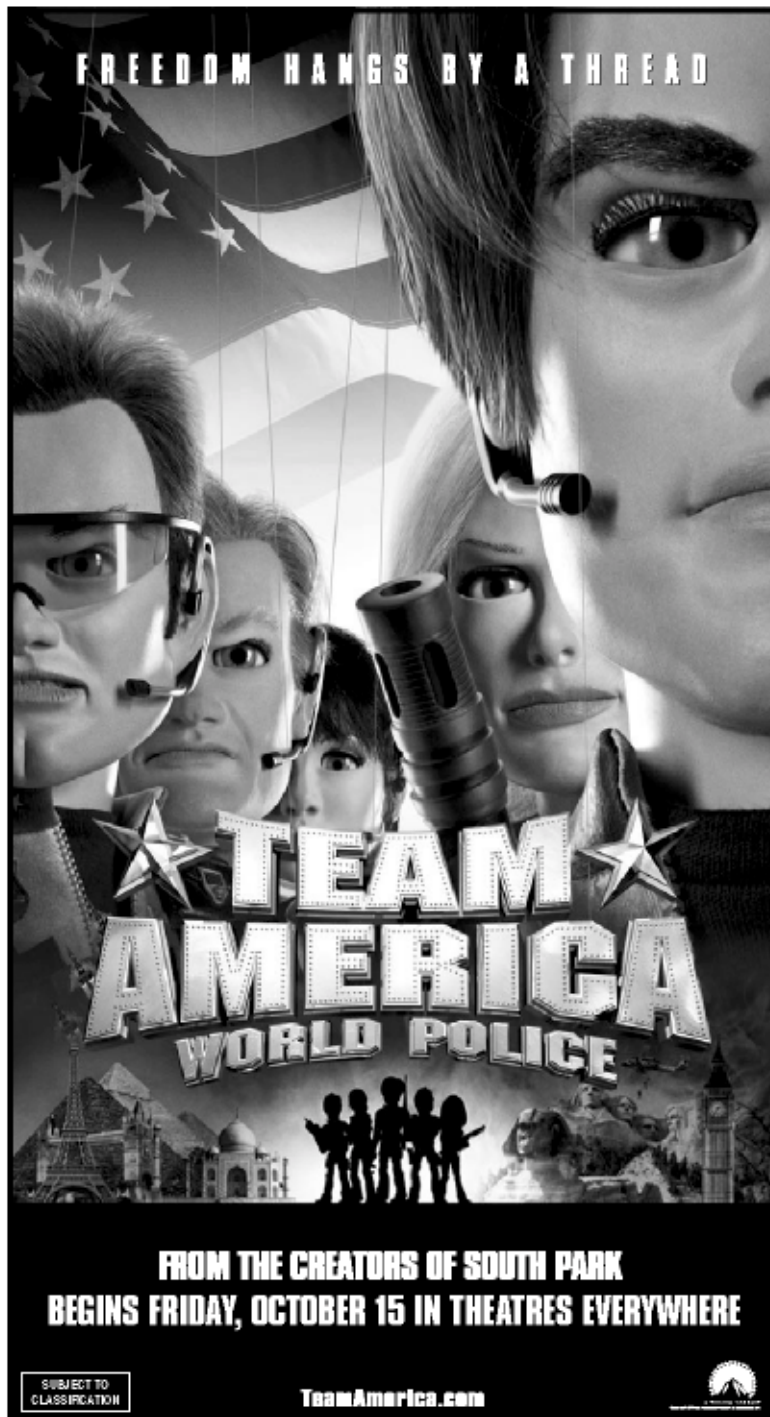
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Soccer duo back on the pitch



Luis Morales and Andrew Zakaluzny both missed their teammates after taking a year off playing soccer.

By Kris Kotarski

At first glance, Luis Morales and Andrew Zakaluzny could not look more different. Morales is hidden in the folds of his baggy jeans and well-worn hoodie. Zakaluzny, on the other hand, looks like he is about to burst out of his T-shirt.

Despite their outward differences, Morales and Zakaluzny have a lot in common. Both are first-generation Canadians, and both are outstanding students and outstanding athletes. With both making their return after a year off from university sport, U of C Soccer Head Coach Andy Gibbs is ecstatic to have regained two veteran players the same year his Dinosaurs host the Canada West Playoffs, November 6 to 7 on the new West Campus Field.

"These guys came in with an average soccer talent, and now they are two of the highest-standard players on our team and in the conference," says Gibbs. "All they needed was time and dedication to develop academically and as athletes."

The pair's return was never a foregone conclusion. At this time last year, Zakaluzny was still trying to decide where to begin his Master's degree in Engineering. As the U of C Computer Engineering Gold Medallist and a Rhodes Scholarship Finalist in 2003, all the doors were wide open.

"Last October I was volunteering four times a week with the Heartland Agency's Even Start Program, and I was planning my Asia tour," says Zakaluzny. "I left in December, but by the time I got back in July reasons such as family and friends, scholarships, and my potential adviser at U of C influ-

enced me to stay in Calgary."

While Zakaluzny was traveling through the Southern Hemisphere, Morales, his teammate of four years, was even further away from the pitch.

"Last year, I was still lost and amazed by the first year of U of C Law School," he laughs. "I actually had seven courses and was pretty stressed out trying to learn what really is a new language. I was also trying to get used to not playing soccer and being in a more professional environment."

This year Morales is comfortably settled in second-year Law, and the part-time actor, writer and three-time Academic All-Canadian decided to return to the pitch.

"I missed the guys; showing up for practice; the intensity of school-work and sport," he says. "I also wanted to take full advantage of being able to play varsity sports. After having dedicated four years of my life to the U of C men's soccer team, I wanted to complete my eligibility."

Upon hearing news that both were returning, coach Gibbs didn't hesitate to name them co-captains along with fellow fifth-year player Jon Remmer.

"On the field, I expect a lot of myself and I think that the young guys and the rest of my teammates can see that," says Morales. "Off the field, I think that I am in a position to share my experiences with other guys who are new to the team."

"I think I can motivate most players to do what we need to win games," says Zakaluzny. "And we have to achieve our big goal: to win the Canada West Conference. There is no way we can lose. Not on our home field."

HOT OFF THE PRESS



Canada and the New American Empire: War and Anti-War
Edited by George Melnyk
Published by U of C Press

The U.S. invasion of Iraq in 2003 sent shock waves around the world. The unilateral decision to invade Iraq and overthrow its government was opposed by many nations and its citizens. Prior to the invasion,

tens of millions of people around the globe marched with one voice demanding peace and calling for restraint against the looming threat of war. Recognizing this open opposition from governments and the public, Canada refused to join the invasion, even though it was a longtime ally of the United States. The influential contributors to this book discuss the ramifications of this decision for Canada-U.S. relations from the standpoint of multilateralism and national sovereignty.

Melnik teaches Canadian Studies in the Faculty of Communication and Culture. He is the author and editor of numerous books on Canadian culture and society, including the recent *Canada and September 11: Impact and Response*.



The Garden of Art: Sculptor
By Don Kerr
Published by U of C Press

Part biography and part journalism, *The Garden of Art* is a compelling portrait of a distinctive Canadian artist. For over 40 years, Vic Cicansky has created sculptures that are whimsical, elegant, surreal, and above all, profoundly unique. The book, along with a wealth of colour photographs, describes Cicansky's creative methods used throughout his career. The book chronicles

the life and times of the artist from his childhood as the son of poor Romanian immigrants growing up in East Regina to his pivotal art school sojourn at Davis, California in the 1960s, as well as his grassroots politics and passion for gardening.

Don Kerr is a prominent western Canadian writer who has published plays, poetry, and short stories in addition to editing the literary magazines *GRAIN* and *NeWest Review*. Most recently he has taught drama in the English department at the University of Saskatchewan.

Books by U of C faculty and staff will be featured every second week.

CLASSIFIED

Nitestyles (Established 1992): Men's Haircuts: \$22. Women's Haircuts: \$25. Show student ID and receive \$7 off haircut. Sherina (Licenced 1984): 313-9592 and 815-2103. #105 301 14th Street NW.

Looking for information on health, nutrition, self-empowerment, career, etc.? Look no further! Women's Web is an online community for women, by women. Find information, message boards and chat. Visit www.womensweb.ca to learn more.

Art Rental Services - Triangle Gallery: Rent and/or purchase art work by artists from Calgary and region. Realist to abstract. Wide selection of sizes and media. www.artrentals.ca. Phone 874-9685 or 630-1913.

Landscaping and Clean-up: Power rake, aerate, general clean-up. Landscaping, interlocking stone, patios, walkways, rock walls, irrigation installation & repair, decks (new or repairs). Contact Wayne Schuks, 998-4569 or wschuks@ucalgary.ca

Calgary Council for Advanced Technology (CCAT) presents a dinner event, titled "From Technical Marvel to Market Leader - How to win the hearts, minds and business of your ideal customers" on Oct. 20 at the Calgary Petroleum Club. Visit www.ccat.org for more information.

To place your classified ad please call OnCampus at 220-3502 or email kenben@ucalgary.ca. Each word costs 15 cents.

OnCampus is on the Web:
www.ucalgary.ca/oncampus/weekly

OCT. 15-24

Friday, Oct. 15

12 noon SEMINAR: **Beliefs and Behaviours: Chiropractors and Immunization.** Dr. Margaret Russell, Dept. of Community Health Sciences. G500 Health Sciences Centre.

12 noon WORDFEST: **Our Canada.** Anosh Irani, Patrick Lane & Drew Hayden Taylor. Nickle Arts Museum.

1 pm TALK: **The State of Canada's National Defence.** Gordon O'Connor, MP, Conservative Defence Critic. Escalus Room (234) MacEwan Centre.

3 pm TALK: **Ice Roads in the Mackenzie Delta.** Steve Barnett, Challenger Geomatics. Earth Sciences 443.

4:30 pm RETIREMENT: **Dr. Cooper Langford,** Dept. of Chemistry & Faculty of Communication & Culture, is retiring after 12 years. RSVP to Mimi 220-5885. University Club, MacEwan Student Centre.

5 pm **Men's Basketball "Beast Invitational Tournament."** DINOS are hosting teams from U of A; Brock & Ryerson. Actions starts at 5 pm, Dinos play at 7 pm today & Saturday and 3 pm on Sunday. Continues all weekend. Jack Simpson Gym.

7 pm **DINOS Hockey vs UBC.** Father David Bauer Arena.

8 pm MUSIC: **Tanya Dusevic, flute with Charles Foreman, piano.** Dept. of Music - Celebrity Series. Tix: adults: \$25; stu/sen: \$18. Info: 220-4999. Eckhardt-Gramatte Hall, Rozsa Centre.

8 pm CONCERT: **Matt Good with guests.** Tix: Ticketmaster. All Ages. MacEwan Hall.

8 pm CONCERT: **Tchaikovsky's 5th.** The Calgary Philharmonic Orchestra will be performing the award-winning piece, Utterances, written by the U of C's 2004 Distinguished Alumni Award recipient, Kelly-Marie Murphy. Jack Singer Concert Hall.

Saturday, Oct. 16

8 am **2nd Annual Diabetes Awareness**

Day. Top U of C faculty of Medicine & Calgary Health Region researchers are giving public lectures on the latest in diabetes research, patient care & health. Door prizes, snacks, interactive displays & more! Free admission & parking. Info: 220-2261. Health Sciences Centre, 3330 Hospital Dr. NW.

10 am - 6 pm SHOW: **Chemistry Show at Market Mall.** U of C's Dept. of Chemistry kicks off National Chemistry Week by presenting its 12th annual Chemistry Show at Market Mall. Suitable for all ages. Calgary Market Mall (Safeway Court); Shaganappi Tr. NW.

7 pm **DINOS Hockey vs UBC.** Father David Bauer Arena.

8 pm MUSIC: **Tanya Dusevic, flute with Charles Foreman, piano.** See Friday, Oct. 15 for details.

8 pm CONCERT: **Tchaikovsky's 5th.** See Friday, Oct. 15 for details.

Monday, Oct. 18

9 am GLOBAL SATELLITE PROGRAM: **Global Leadership.** Speaker, Mikhail Gorbachev, Former President, Soviet Union. Students: staff & faculty \$99 + GST. Call 220-2877 or www.micaworld.com.

11 am - 1 pm SALE: **Annual Print Sale.** Dept. of Art. Featuring limited edition prints from undergraduate & masters students as well as faculty members. All Prints \$25. Art Building 617.

12 noon PANEL DISCUSSION: **Sherlock Holmes: Retelling Old Stories.** Panel: Stephen Massicotte; Ian Prinsloo; Bart Beaty; Ken MacMillan & Kathleen Scherf. McNally Robinson Bookstore.

RSVP Deadline for Book Launch Oct. 21 @ McDougall Centre. Call 220-5677.

United Nations Week Celebration - Oct. 18 - 23. UNAC Calgary & SGI Canada are partnering with venue hosts, U of C International Centre & the City of Calgary Devonian Gardens. Information: 235-7714.

Tuesday, Oct. 19

9 am - noon **Flu Shots** available at Health Services on a walk-in basis. \$15 with valid Alberta Health Care card. No charge for high-risk patients. Call 220-5765 for info. 3rd Fl, MacEwan Student Centre.

11 am - 1 pm SALE: **Annual Print Sale.** See Monday, Oct. 18 for details.

12 noon TALK: **Addressing Issues of Bullying.** Penny Mellor, Calgary Family Services. Staff Wellness Centre. Space limited. Pre-register at robinsod@ucalgary.ca or 220-8990. Science B 142.

7 pm ISRAEL IN FILM: **WARS AND ORDINARY PEOPLE** film series showing **Cup Final.** Introduction of films & open discussion, led by Alan Dowty, Kahanoff Professor of Israel Studies. Murray Fraser Hall 164.

8 pm CONCERT: **Billy Talent with guests.** Co-sponsored by U of C Students' Union, House of Blues Concerts & Union Events. Tix: \$23 + service at Ticketmaster, Sloth, & Megatunes. All ages. MacEwan Hall.

Wed., Oct. 20

9 am - 4 pm **Flu Shots.** See Tuesday, Oct. 19 for details.

ALL DAY: **UN Week Exhibit:** "Seeds of Change: The Earth Charter and Human Potential." Runs until Oct. 22. MacEwan Student Centre North Courtyard.

10 am - 2 pm DEMONSTRATION: **The Faculty of Medicine** presents a demonstration of the state-of-the-art core facilities & services available to support research activities. Speak with directors of the facilities & see firsthand the types of technologies available. Door prizes, refreshments & tours. The Atrium, Heritage Medical Research Building.

11 am - 1 pm SALE: **Annual Print Sale.** See Monday, Oct. 18 for details.

12 noon FORUM: **Seeds of Change.** Featuring speakers from the International Centre, Calgary Branch of the UN Association in Canada, Soka Gakkai International & the Centre for Affordable Water and Sanitation Technology. Husky Oil

Great Hall, Rozsa Centre.

6 pm LECTURE: **The Poetics of Brickwork, Edward Allen, architect.** EVDS launch of the inaugural Canadian Masonry Research Institute Lecture. Register at 220-8992 by Oct. 13. Evans Room, Rozsa Centre.

7 pm TALK: **Guiding the Emotional Development of your Gifted Child.** Dr. Sal Mendaglio. Info: 220-7799.

8 pm MUSIC: **Xavier Rudd.** Age ID required. Tix: \$15 at Megatunes, The Liberty Lounge, Campus Ticket Centre & Sloth. The Den, MacEwan Student Centre.

SGI Canada's **"Seeds of Change - the Earth Charter & Human Potential" Exhibit** makes its Calgary debut Oct. 20 - 29. Co-sponsored by the U of C International Centre & the Devonian Gardens. Info: 235-7714.

Free Fall Health Check on Wednesday, Oct. 28. Contact Doris at 220-8990 for an appointment and information.

Thursday, Oct. 21

7th Annual Materials Management Trade Show, showcasing the UofC's suppliers. Product demos, prizes, info sessions, & more. MacEwan Hall.

12 noon SERIES: **Readings in Progressive Christianity.** Info: Tim Nethercott, Chaplain at 220-3896. MacEwan Student Centre 391.

12 noon SEMINAR: **Gasping for Air: Physiological Evolution of Terrestrial Life.** Dr. Brian McMahon, Professor Emeritus, Dept. of Biological Sciences. Info: ceri@ucalgary.ca. BioSciences 211.

12:10 pm TALK: **Burning Sappho's Books.** Alexandra Haesecker, Artist. Nickle Arts Museum.

2 pm READING: **Dead Girls** by Nancy Lee. Named Book of the Year by NOW Magazine, and a best book of 2002 by the Globe & Mail. Presented by The Canada Council & the Dept. of English Visiting Speakers Committee. Science Theatre 127.

5:30 BOOK LAUNCH: **Becoming a Teacher in 20th Century Calgary.** Dr. Robert

Concert features grad

By Tokie Onoda

The U of C's recent graduate Lana Henschell returns to university this month to perform a piano recital as part of Eckhardt-Gramatté National Music Competition Winner's Tour 2004. This Canada-wide recital tour was awarded to her when she took first prize in 27th Eckhardt-Gramatté National Music Competition, one of Canada's major international musical contests, in May 2004.

The Winner's Tour performs in cities such as Victoria, Vancouver, Calgary, Edmonton, Thunder Bay, Halifax, Montréal and Toronto. The first prize also included an award of \$5,000 and a short-term recording residency with The Banff Centre's Music & Sound Program.

Born in Calgary, Henschell received her Bachelor of Music and Master of Music degrees from the University of Calgary, where she studied with Professor Marilyn Engle under major scholarships. Both as soloist and accompanist, Henschell has performed many recitals in the Calgary area, and appeared with orchestras playing concerti by Beethoven, Rachmaninoff and Grieg. She also participated in the 2003 "Barbara Krakauer" Academy in Vaison-la-Romaine, France through a grant from the Alberta Foundation of the Arts.

Henschell performs a demanding program featuring *Fantasia and Fugue in A minor, BWV 944* by J.S. Bach, *Sonata in A major, Op. 2, No. 2* by Beethoven, *Butterflies & Bobcats* (2004 E-gré Competition commissioned work) by David L. McIntyre, *Piano Caprice No. 6* by S.C. Eckhardt-Gramatté, *Sonata by Bartók* and *Sonata No. 5, Op. 53* by Alexander Scriabin

The performance begins at 8 p.m. at Eckhardt-Gramatté Hall of the Rozsa Centre. Tickets are \$15 (adults) / \$10 (students/seniors) and available through Campus Ticket Centre at 220-7202. For more information, call 220-4999 or visit www.ffa.ucalgary.ca



Lana Henschell will perform a demanding program in her return to Calgary.

Stamp, Faculty of Education. "Celebrating 100 years of Teacher Education in Alberta". RSVP to Jane at 220-5677.

7:30 pm LECTURE: **The Polis as Teacher.** Prof. Daniel Robinson, Oxford University. Info: Denise 220-7238. Nickle Arts Museum.

Friday, Oct. 22

12 noon SEMINAR: **Entertainment and Politics: The Influence of Pop Culture on Young Adult Political Socialization.** Dr. David Jackson, Bowling Green State Univ. Social Sciences 729.

8 pm CONCERT: **Hayden's Harvest.** With guests, Cuff the Duke and The Elk Lake Serenaders. Tix: \$18.50 + services at Ticketmaster, Megatunes and Sloth. All ages. MacEwan Hall.

Saturday, Oct. 23

11 am - 3 pm EXHIBITION: **Research Reveals.** Exhibitions of gambling-related research supported by the Alberta Gaming Research Institute. North Courtyard (adjacent to Food Court) MacEwan Student Centre.

Sunday, Oct. 24

7:30 pm MUSIC: **Liederkreis.** Tix: adults - \$20; stu/sen/child/ members - \$15 at Campus Ticket Centre 220-7202. Info: 240-4174. Eckhardt-Gramatte Hall.

8 pm CONCERT: **Yellowcard with guests.** Co-sponsored by Students' Union & Union Events. All ages. Tix: \$22.50 + service at Ticketmaster, Megatunes & Sloth. MacEwan Hall.

The listed events are of general interest. Events of a specialized nature may not be listed here but can be found on the Web at www.ucalgary.ca/events. Email your events information to vbrown@ucalgary.ca

