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THE UNIVERSITY OF BRITISH COLUMBIA

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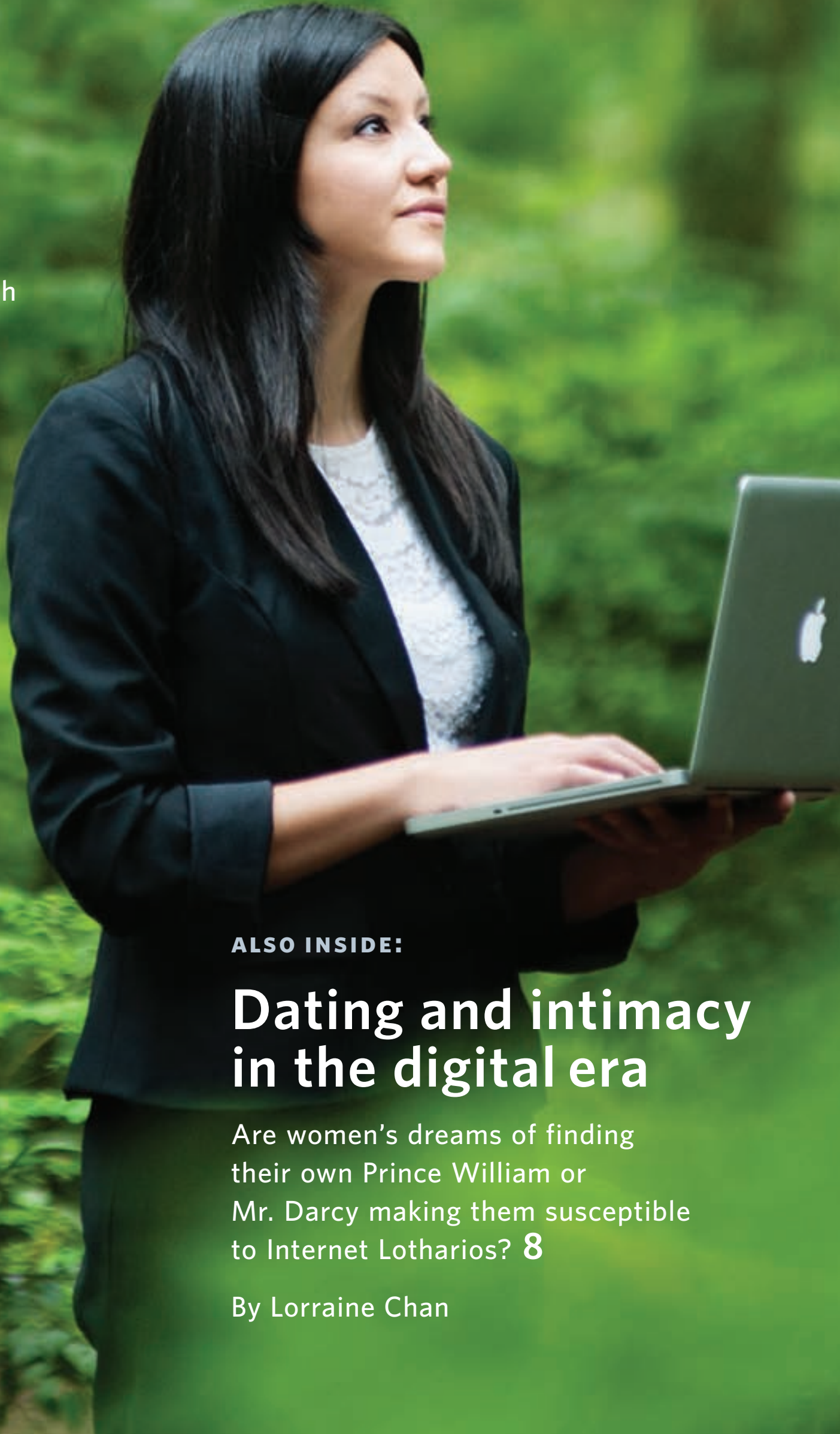
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Bill McLennan Photograph

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Compiled by Heather Amos

### UBC REPORTS

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### AWARDS

#### Museum of Anthropology wins prestigious award

*The Globe and Mail*, *Canadian Architect*, *Vancouver Sun* and others reported that UBC's Museum of Anthropology was one of four buildings to win the Prix du XXe Siècle Award from the Royal Architectural Institute of Canada. The award recognizes nationally significant buildings and excellence in architecture.

Designed by the renowned Vancouver architect Arthur Erickson, the Museum of Anthropology is known for its Pacific Northwest Coast collections and draws more than 140,000 visitors a year.

"Having the Museum of Anthropology recognized as one of Canada's most significant buildings is truly an honour," said **Moya Waters**, the museum's acting director.

### UBC RESEARCH

#### Interactive teaching methods boost learning

Research from a group led by **Carl Wieman**, a Nobel laureate in physics who leads an initiative to improve science instruction at UBC, showed that students in an introductory college physics course did especially well on an exam after attending experimental, collaborative classes. By contrast, students who did not use the experimental approach scored much lower on the same exam.

The students learned more than twice as much in the new "interactive" classes than they did in the lectures by a tenured professor with more than 30 years of experience, reported the *New York Times*, the *Economist*, the *Associated Press*, *Postmedia News*, the *Globe and Mail* and others.

"[In traditional lectures], there's not much learning, and for the learning that does take place, the retention is fairly bad," said **Louis Deslauriers**, a postdoctoral student at UBC and the lead author of the study, which was published in the journal *Science*.

#### Health of older spouses is closely tied

A new UBC study, reported in the *Boston Globe*, *Los Angeles Times*, *Global National* and others, finds that the mental and physical health of older couples is closely tied.

If one is depressed, the other is more likely to be. And if one is in poor physical health, the other's physical and mental health are likely to be compromised.

"This study shows how important marital relationships can be in determining old age health," said the lead author of the study, **Christiane Hoppmann**.

#### Happy guys finish last

A new UBC study indicates there may be some scientific truth to the stereotypes about male and female attractiveness. The study found that women prefer moody looking men to agreeable, smiling men. In contrast, men are far more attracted to happy, smiling women, reported the *Telegraph*, *CBS*, *Reuters*, *BBC*, *Globe and Mail*, and others.

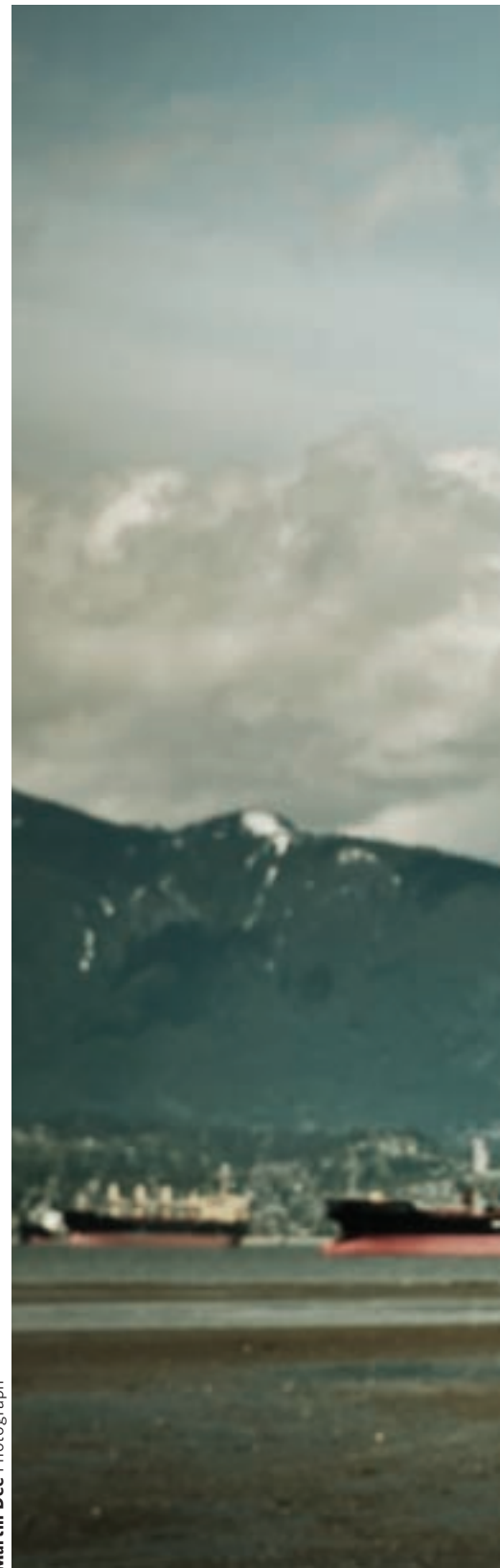
"This study finds that men and women respond very differently to displays of emotion, including smiles," said professor **Jessica Tracy**, who led the study.

### UBC EXPERTS

#### Election 2011

As Canada prepared for a federal election on May 2, UBC professors provided analysis of Canadian politics, public opinion, campaign issues, the political parties, their platforms and the election results. **Richard Johnston**, **Allan Tupper**, **Michael Byers**, **Kevin Milligan**, **Fred Cutler**, **Mary Liston**, **Joe Cutbirth**, AMS President **Jeremy McElroy** and others provided expert commentary to the *Seattle Times*, *Maclean's*, *Globe and Mail*, *CBC*, *National Post* and others.

"For the first time in years, there is enthusiasm on the scene," said Johnston, a political scientist and the director of the Centre for the Study of Democratic Institutions at UBC, to *CTV* on election day. "It's basically about Jack Layton and the NDP and a reconfiguration of the competitive picture."



Martin Dee Photograph

#### UBC Law professor Catherine Dauvergne, Canada Research Chair in Migration Law, recently completed the most comprehensive investigation of how terrorism laws introduced following the Sept. 11, 2001, attacks have impacted Canada's refugee system.

Based on 11 years of national refugee decisions (1998-2008), the findings suggest that Canada is anything but "soft on terrorism," as some media and politicians have recently claimed, Dauvergne says.

"Canada, like most Western countries, has not yet struck an acceptable balance between security and asylum," says Dauvergne. She says Canada is putting the lives of legitimate refugees in danger and is at risk of breaking international human rights laws out of unfounded fears of terrorism.

According to Dauvergne, Canada's

# Terrorism and Canada's refugee system

Catherine Dauvergne says fears that Canada's refugee system is a back door for terrorists are grossly exaggerated

By Basil Waugh

**Catherine Dauvergne** (left) and **Asha Kaushal** (right) study how terrorism fears after 9/11 have impacted Canada's refugee system.



definition of terrorism has ranked among the broadest in the world since 9/11, making Canada among the hardest countries in the West for refugees to enter. Her study found that Canadian courts rejected refugee claimants for police or military service in another nation, living in the same geographic area as terrorist organizations or simply attending one political rally, for example.

“Our definition of terrorism has expanded to the point that many of the refugees we refuse for terrorism concerns have never participated in violence, political crimes or terrorist organizations, says Dauvergne, who investigated nearly 800 refugee cases.

Despite this wider net, the study finds that refugee exclusions from Canada remain relatively rare. Of the approximately 2,500 annual refugee

claims, the average number of refugees barred entry to Canada has increased from 50 claimants before 2001 to less than 90.

Dauvergne says the modest numbers fly in the face of claims that Canada's refugee system is at high risk for terrorism. “Every time a boat of refugees arrives, there seems to be this popular notion that Canada's refugee system is a haven for terrorists,” she says. “Our findings suggest there is no evidence to support that claim.”

“Our laws make it easier than ever to exclude people for terrorism concerns, but the numbers show our broadened criteria simply do not apply to the overwhelming majority of refugees seeking asylum in Canada,” says Dauvergne, who conducted the study with PhD candidate Asha Kaushal.

However, while the rise in rejections

may seem modest, Dauvergne says there are human lives at stake. She says the findings suggest Canada is failing in its responsibilities – outlined by international refugee law and international human rights law – to protect refugees who face persecution in their former countries.

“When we send refugees back home, we put them at great risk for persecution, imprisonment and even death,” she says, noting that an estimated several hundred of people have died in the past year while seeking asylum in countries and around the world.

“As a society committed to human rights and social justice, it is important that we get this balance between security and asylum right,” says Dauvergne, who characterizes her findings as call for “a renewed

discussion for thoughtful standards about who may be considered a terrorist, for what acts, and in what circumstances.”

Dauvergne says refugee claimants face greater scrutiny – before and after acceptance – than people in most other immigration categories, including student visas and work permits. They also consent to have their actions monitored by government agencies for the duration of what can be a very long claim period.

The countries with the most refugee claimants barred from Canada during the data period include China (51), followed by Colombia, Pakistan, Lebanon, Mexico, Sri Lanka, Peru and Cuba. ●

**Learn more about UBC's Faculty of Law at: [www.law.ubc.ca](http://www.law.ubc.ca).**

# Library digitizes rare Japanese maps

A new online cultural resource is a reflection of UBC's strong ties and support for a devastated country

By Glenn Drexhage

Shirin Eshghi (left) and Katherine Kalsbeek (right) of UBC Library peer over one of the vibrant Tokugawa maps.



**With the largest Asian studies program in Canada, partnerships with Japanese universities, and campus treasures like the Nitobe Gardens, UBC has strong ties with Japan and is the home of many Japanese scholars and resources. One rare cultural collection can now be celebrated online.**

In 2010, the Library completed the third and final phase of a multi-year project, led by its Digital Initiatives Unit, that involved the digitization of hundreds of rare maps dating to Japan's Tokugawa, or Edo, period (1600-1868).

Work on the project began in 2005. Much of the material, which dates from about 1650 to 1850, was acquired from collector George H. Beans decades ago.

The set of works, one of the largest of its kind outside of Japan, specializes

in private and travel-related maps and guides (including maps of Yokohama, Vancouver's sister city). It has attracted students and scholars in Asian Studies, architecture, literature and language, history, religious studies and art history.

The latter part of the project focused on the digitization of nearly 100 atlases, along with 16 huge maps. The entire effort is online in English and Japanese at <http://digitalcollections.library.ubc.ca/tokugawa> (click on the browse button to peruse the pieces).

The result is a comprehensive collection that can be accessed by students and researchers from UBC and beyond. Katherine Kalsbeek, a reference librarian at the Library's Rare Books and Special Collections division, notes that many researchers interested in the Tokugawa collection aren't based in Canada. Now, they no longer need

to make in-person visits to the Point Grey campus if they want to examine the material. "We have received a lot of positive feedback from the UBC community and from researchers throughout the world," she says.

Christina Laffin, an assistant professor in UBC's Department of Asian Studies, says the Tokugawa collection deserves greater attention from the scholarly community. "I know of numerous researchers who have utilized the maps and who are excited at being able to access it online," she notes.

A few samples are poignant today. One item, an account of earthquakes in a chapbook-sized publication, features bold images of a catfish and a dragon (both are associated with quakes in Japanese lore). Meanwhile, a large, rectangular panel boasts a vibrant and colourful take on foreigners, beginning

with elaborately dressed Japanese figures, and encompassing subjects in European dress along with esoteric characters such as giants and cannibals. A scroll, bound in a fragile wooden box and bordered in gold leaf, unfurls to display shipping routes stretching from Kobe to Nagasaki.

The collection's accessibility also presents teaching opportunities. "Because the maps and atlases are now digitized, there is the potential for the items to be used as classroom texts, regardless of the size of the class," says Shirin Eshghi, Japanese language librarian at UBC's Asian Library.

Gideon Fujiwara, a PhD student in Asian Studies at UBC, has toured the collection as a teaching assistant with Asia 101 students. "This visit was probably my best TA experience to date. The digitization of this collection is



Martin Dee Photograph

## Tokugawa Terms

### Komonjo

古文書  
refers to old documents

### Kuzushiji

崩し字  
are cursive, running characters

### Kanbun

漢文  
is literary Chinese used within Japan

### Hentaigana

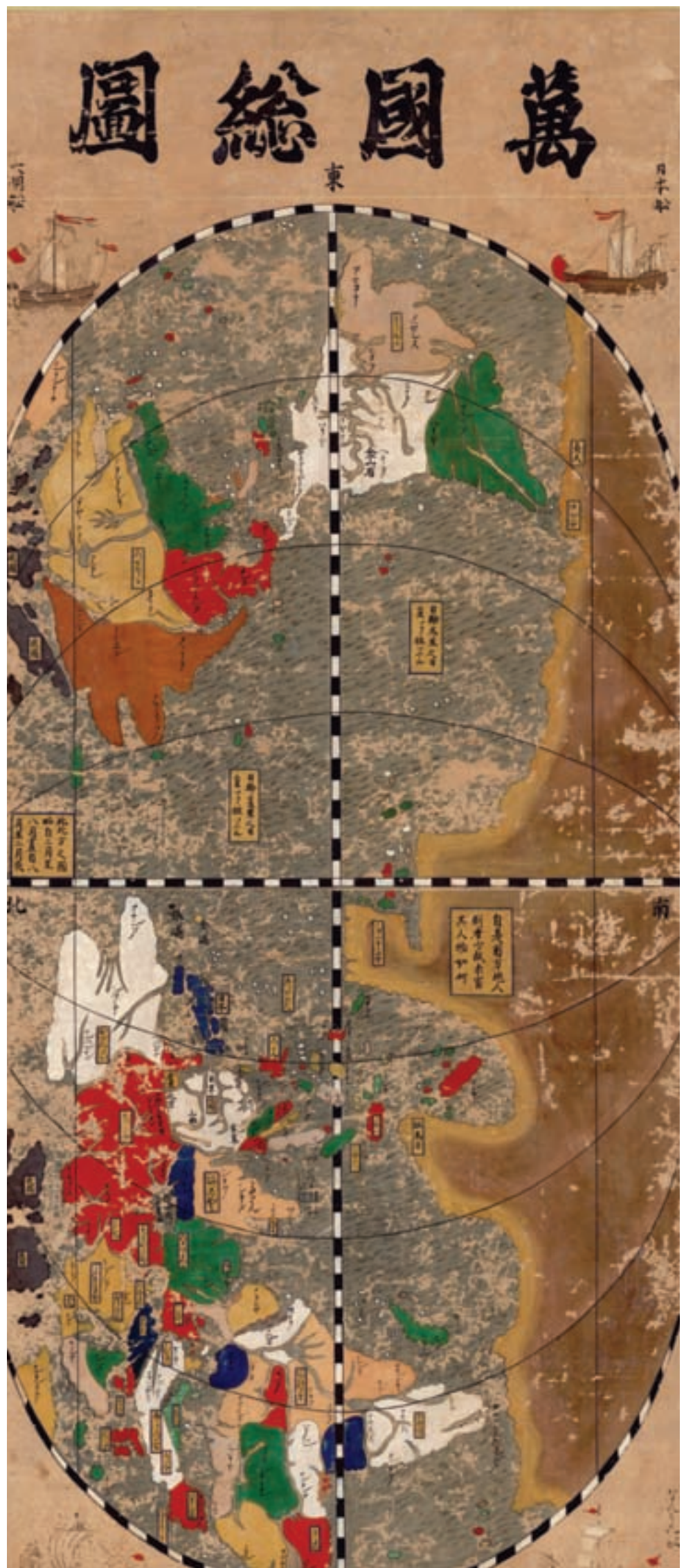
変体仮名  
are variant kana (Japanese syllabary) scripts

### Sōrōbun

候文  
is a formal letter-writing style

Definitions adapted from the *Shōgakkan Puroguresshibu Ei-Wa Chūjiten* (Shogakukan Progressive English-Japanese Dictionary).

Two vibrant **selections** (right) from UBC Library's exceptional Tokugawa maps collection.



fantastic!” he says. “Students in Asian Studies have a lot to be proud of in our department...and this Beans Collection of Tokugawa maps is definitely another jewel that can enrich our learning experience.”

The collaborative project, which involved various UBC Library units, received financial support from the Department of Asian Studies. Students from UBC's School of Library, Archival and Information Studies, and a student intern from Japan's University of Tsukuba, also assisted with the effort. ●

**One item, an account of earthquakes in a chapbook-sized publication, features bold images of a catfish and a dragon.**





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## UBC ANNUAL REVIEW STORIES Call for Submissions

The achievements of UBC's students, faculty, staff, and alumni are celebrated in an online Annual Review: [www.annualreview.ubc.ca](http://www.annualreview.ubc.ca).

UBC Public Affairs is seeking stories from summer 2010 to fall 2011, around the following topics:

**Members of the UBC community** who have been the catalyst for a significant improvement.

**UBC's international scope** and connections.

**Stories of individuals** who exemplify the UBC Brand.

**Major milestones** including teaching awards and grants, research awards and news, facility construction and openings.

Please send your submissions by **June 15, 2011** to Bonnie Vockeroth [bonnie.vockeroth@ubc.ca](mailto:bonnie.vockeroth@ubc.ca).

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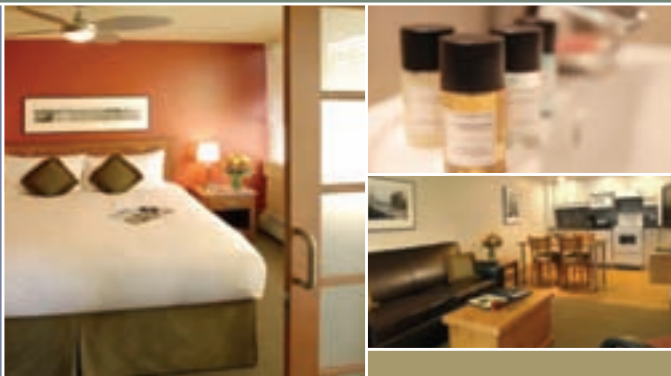
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# Students fuel sustainable solutions

By Basil Waugh

### Student leaders from around the world are travelling to UBC this month to try to tackle the world's top energy problems.

Their destination: the International Student Energy Summit (ISES), where 400 students from 35 countries, environmental scientists and energy industry leaders will explore practical solutions for a more sustainable planet.

The three-day event, headlined by Nobel Prize-recipient Rajendra Pachauri, Chair of the U.N. International Panel on Climate Change and India's Tata Energy Research Institute (TERI), will run from June 9-11 on UBC's Vancouver campus.

"Nearly 85 per cent of the world's energy supply comes from fossil fuels, which produce pollution and climate change – it's unsustainable," says Rosie Pidcock, a graduating Sauder School of Business student who is co-leading a team of 30 student organizers. "ISES will focus on global energy sustainability and how students and society can accelerate the transition to a low-carbon society."

Pidcock, who has a passion for green business, hopes ISES will shatter expectations of what a student-led environmental conference looks like. For example, the students have assembled an advisory board of major energy leaders, including Randy Gossen of the World Petroleum Council, and attracted more than \$300,000 in sponsorships to support housing and travel bursaries for participants in need.

While pairing oil sands executives with environmentalists is arguably akin to throwing cats in a bag, Pidcock says it is essential for real progress. "If we are going to have a meaningful conversa-

## "Business has real power to create positive change."

tion about energy, you need to engage all stakeholders, especially government and energy companies, because they hold the key to progress in many ways," she says. "Business has real power to create positive change."

The event, which is sponsored by the UBC Sustainability Initiative, will focus on three areas: technology and innovation, markets and regulation, and global energy dynamics. Shying away from controversy won't be on the agenda, says Pidcock, noting there will be a debate on Enbridge Corporation's contentious proposed Northern Gateway Pipeline for B.C. and Alberta.

Enbridge President John Carruthers is among the group of individuals who have been asked to review the case that delegates will debate. The case will provide delegates with a base of knowledge to analyze the

environmental, business and technological aspects of the multi-billion dollar project, which seeks to bring Canadian oil to foreign markets, but faces environmental and land claim concerns from local First Nations and other groups, Pidcock says.

Delegates will also design model low-carbon communities and focus their expertise and passion on the world's 10 most-pressing "unsolvable" energy problems, as voted by delegates using social media, including Twitter and Facebook, in the days leading up to the conference. At the end of the conference, all delegates – from students to CEOs – will pledge to address a specific energy issue in their community.

"We are proud to support student-driven initiatives like ISES that help accelerate the adoption of more sustainable practices both on and off campus," says Alberto Cayuela, Associate Director, UBC Sustainable Initiative, and ISES advisory board member. "We are deeply impressed by the team's passion and commitment to create this innovative energy conference that is organized by students, for students."

Pidcock credits the inaugural ISES conference – which featured former Mexican President Vicente Fox in Calgary in 2009 – for igniting her passion for green business. She returned to UBC and helped to create the Sauder School of Business' specialization in sustainability for undergraduate students.

"That conference really inspired students, myself included, to take action on sustainability," says Pidcock, who recently discussed offshore drilling issues with former U.S. president Bill Clinton at an international sustainability conference in San Diego. "We are working hard to ensure this year's edition has the same effect."

Pidcock is looking forward to meeting green business innovators from other universities. At the top of her list are Harvard graduates Jessica Matthews and Julia Silverman, the creators of *sOcket*, a soccer ball that generates clean electricity to power appliances, including LED lamps, water sterilization devices and mini refrigerators.

"People ask me what a student conference can do in just three days," Pidcock says. "I say we have a Nobel Prize winner, we have students who represent Nobel winners of tomorrow, and we're going to spend three days trying to tackle pressing global energy problems. And you know what? I like our chances." ●

Learn more about ISES 2011 at: [www.studentenergy.org](http://www.studentenergy.org) and follow on Twitter @studentenergy

# Tipping point: How CIRS will transform building water use

By Lynn Warburton



Photograph courtesy of Campus and Community Planning.

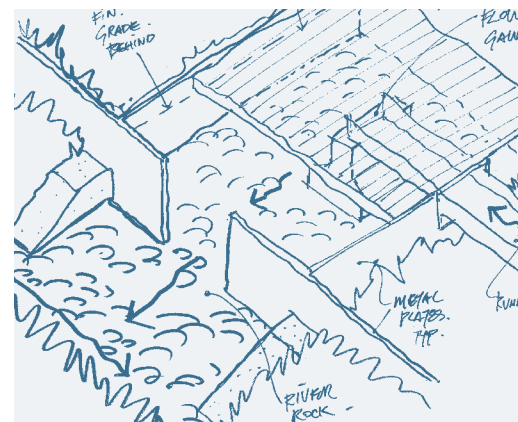
**Strolling by UBC's Centre for Interactive Research on Sustainability (CIRS), most passers-by probably won't be aware that there is a 90m well nearby that penetrates straight through rock and clay to the aquifer below.**

But they will notice a simple, yet intriguing water feature, a tipping bucket. It's fascinating to watch as water trickles in, but this decorative feature will also play a big role as part of the living laboratory. The tipping bucket represents the a combination of engineering and architecture that manages storm-water run-off, and is part of what makes CIRS a restorative building. The tipping bucket, about as big a chair, does much more than collect and pour a stream of water. It's the final destination in the CIRS waste water treatment system before water that can't be used is restored to the aquifer.

It's role is to measure the flow of rain

water the building collects but doesn't use. "Storm water run-off is a growing issue in construction. Recharging the aquifer with what we cannot use is critical at CIRS," say Alberto Cayuela, Associate Director. Only about 10 per cent of all water collected is made potable. Water is collected as it flows and irrigates the green roof and passes through landscaped areas. The excess, unusable water isn't wasted down sewers. It's diverted into the tipping bucket. Water collects in it till it's full and then tips, restoring it to the aquifer at sea level hundreds of feet below UBC.

"How long it takes to collect depends on our consumption and the amount of rainfall. It's an important subject to study," says John Robinson, Executive Director. "All liquid leaving the building will be better than rain when it arrived, net-positive in yet another way," he says. ●



A chair-sized "tipping bucket" (above) is part of a unique water treatment system that will help to make **CIRS** North America's greenest building.

**For more on water management at CIRS, visit: [www.sustain.ubc.ca](http://www.sustain.ubc.ca)**

# Dating and intimacy in the digital era

By Lorraine Chan

**Cindy Masaro** will look at the reasons why women in older age groups are not practicing safe sex.



## Infection Rates

### Rising Numbers

Between 1999 and 2008, Canada saw increased rates of reported chlamydia and gonorrhoea cases among females, especially those 25 years of age and over.

### Chlamydia

For chlamydia, the greatest rate increases were seen in the 30 to 39 (157 per cent) and 40 to 59 year age groups (134 per cent). These same age groups also saw the greatest rate increases in gonorrhoea (288 per cent and 211 per cent respectively).

### Gonorrhoea

Out of a total of 82,929 reported cases of chlamydia in 2008, 66 per cent of these were female. For gonorrhoea, females accounted for 44 per cent of the 12,723 reported cases.

### HIV

Prior to 1999, females represented 12 per cent of all positive HIV tests in Canada. By the end of 2006, this figure had risen to 28 per cent.

### Are women's dreams of finding their own Prince William or Mr. Darcy making them susceptible to Internet Lotharios?

For her doctoral thesis, School of Nursing PhD candidate Cindy Masaro is investigating how social forces within a digital era are shaping women's sexual behaviour and risk-taking during dating and early intimate encounters.

Masaro says her findings will help to make public health interventions more effective. To date, education campaigns on condom use and safe sex have focused mainly on teens and twenty-somethings. But over the past decade, rates of transmitted infections (STIs) and HIV have steadily increased among Canadian women aged 30 to 60. (See sidebar for details).

"There's very little research on adult women's sexual behaviour," says

### "Very quickly there can be exchanges of highly intimate information."

Masaro. "Existing studies indicate that many women are not using condoms, but the reasons they are not engaging in safer sexual behaviour are not known."

She says one possible factor could be the sped-up nature of hookups in today's online dating world. "Researchers have shown that computer-mediated communication accelerates development of a sense of trust and closeness. Very quickly there can be exchanges of highly intimate information."

Another influence may be the

traditional scripts and romantic narratives that underpin gender roles, observes Masaro.

"Women frequently watch films or read books about finding that one true love, the person who will transform their lives. They may be tempted to put on the blinkers when a potential partner appears to fit that bill."

When something bad happens – such as a diagnosis of chlamydia – women can feel quite devastated, says Masaro who works part time as a nurse-clinician at a Vancouver STI/HIV clinic.

"They believed the guy to be clean and healthy."

For her study, Masaro will compare how face-to-face encounters and computer-mediated communication – from texting to online dating – influence women's





Martin Dee Photograph

decisions. Through an online survey, Masaro will gather data on variables such as: type and frequency of communications; time to sexual intimacy; trust; sexual self-disclosure; discussions about safer sex; women's motivations for having sex; feelings of pressure to have sex; and sexual risk behaviours.

"Little attention has been paid to adult women's sexuality and STI or HIV behaviours as they are assumed to be at low risk."

Masaro says, "For many adults in older age groups, condom use may be associated more with pregnancy prevention than the dangers of STIs or HIV, especially if prior to dating, they had been in a long-term relationship."

In fact, recent Canadian statistics show that significantly fewer women aged 25 to 49 report condom use at last

intercourse compared to those aged 15 to 24.

Masaro says that health interventions and campaign messaging must consider the broader cultural and social contexts. For instance, health campaigns often place the onus on women to negotiate condom use.

"Some women may lack the power to negotiate condom use. A woman might refrain from using condoms in an effort to please her partner and develop intimacy. Others may find that condoms hamper their sexual pleasure or enjoyment." ●

**To learn more about the research or take part in the study, visit: [www.datingconfidential.ca](http://www.datingconfidential.ca)**



Prof. Hugo De Burgos was interested in how people talk about their illness.

## Prof. documents lead poisoning in El Salvador

By Jody Jacob

### A woman looks at the camera and says, "Only death awaits us here."

She is a resident of Sitio del Niño, El Salvador, where thousands of tons of lead from a decade of industrial operations found their way into the community's water, food, soil and air. The disastrous result of this poisoning is the subject of *The Site of Lead*, a new ethnographic documentary film by Prof. Hugo De Burgos at UBC's Okanagan campus.

De Burgos, who has a PhD in medical anthropology, created the 40-minute film to document Sitio del Niño's experience of lead contamination from a car battery factory operating in the community since 1997. Although the factory closed in 2007, residents are still struggling to remove more than 32,000 tons of lead slag and to decontaminate their natural environment and people.

"I went to Sitio del Niño in 2009 with the aim of making a documentary on people's narratives of trauma – how they talk about trauma in a non-clinical, non-pathologized fashion, which is something that often helps them build character and makes them more resilient," says De Burgos. "But I ended up focusing on more immediate and recent trauma – the lead contamination, which was causing all kinds of trauma, not only physiological but physiological."

The World Health Organization claims that more than 10 micrograms of lead per decilitre of blood in a person poses a serious health risk. In Sitio del Niño, however, some people have more than 50 micrograms. The average child in the community has 32 micrograms of lead in the blood, a level that can affect the neurological system, liver, bones, and also cause anemia.

"I was interested in both the politics of this lead contamination and the subjective experience of being contaminated by lead – how the people in the community talk about their illness," says De Burgos.

De Burgos filmed for three months with a small crew of colleagues and family.

"People in the community wanted to tell the story not only to the El Salvadorian population but to the international community," he says.

"The film examines structural violence – a form of violence based on the systemic ways in which a given social structure or institution harms people by preventing them from meeting their basic needs," says De Burgos. He notes that in medical anthropology, the term "macro-parasite" describes how societies can be organized in such a way that human sickness and death is the result.

"Inequality and social power put some people at risk for being ill – that is exactly what happened in Sitio del Niño. The people were contaminated by lead not because lead particles naturally liked these people, but because their position in the El Salvadorian society made them more vulnerable."

De Burgos says his film highlights how organized community action can exercise enough political pressure to fight a corporation, and brings awareness about how humans organize society and how this structure can be detrimental to some of its members.

"The way we structure our society can prevent some humans from developing their full human potential, and sometimes make them sick or kill them," he says. "This is very difficult to detect because one of the main characteristics of structural violence is that it is difficult to see, but by creating awareness we can start changing our society for the common good and not only for the benefit of a few." ●

**The Site of Lead can be viewed online at: [www.ubc.ca/okanagan/cssej/publishing/cssejpress/The\\_Site\\_of\\_Lead.html](http://www.ubc.ca/okanagan/cssej/publishing/cssejpress/The_Site_of_Lead.html)**



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# BUYIN

## UBC Farm Market

The adventurous buy garlic scapes or Jerusalem artichokes. Others stick to staples like organic eggs, peas, chard and kale. The UBC Farm Market on UBC Vancouver's South Campus has become a popular destination for Saturday shoppers who like their produce locally grown and organic – not to mention great tasting.

Difficult to believe then that UBC Farm Market began as a class project at the Faculty of Land and Food Systems. In 2001, Rosy Smit and Barb de Cook, third-year agriculture science students, received approval from the Faculty and their profs to develop a small market garden at UBC Farm. They succeeded.

Over the years, the garden-scale project has grown to the production-scale operation it is today. As a working farm that integrates teaching and research, UBC's Centre for Sustainable Food Systems now hosts upwards of 60 courses and dozens of research projects. UBC Farm produces more than 250 varieties of vegetables, berries, herbs, fruits, flowers, eggs, honey, and agroforestry products through its 24-hectare mosaic of cultivated fields, orchards, pasture for cattle and chickens, apiaries, teaching gardens, and forest stands.

Mark Bomford, director of the Centre for Sustainable Food Systems, notes that, "Last year, sales were 30 times higher than what they were in 2001 when Barb and Rosy started the first on-farm market."

### UBC Farm Market Hours

The UBC Farm Market runs Saturdays from 9 a.m. to 1 p.m. from June to October.

### UBC Farm Market Campus Days

Market sales on campus take place in front of the UBC Bookstore on Wednesdays, from 11:30 a.m. to 1:30 p.m.

**For more information, visit:  
[www.landfood.ubc.ca/ubcfarm](http://www.landfood.ubc.ca/ubcfarm)**



Photographs courtesy of UBC Farm

# Helping island farmers get to market

By Lorraine Chan

# GLOCAL

Kim Lucas (left) and Keely Johnston (right) loved the hands-on learning in their third-year “Land, Food and Community” course.



Martin Dee Photograph

## Artisan cheeses from Salt Spring Island and Hornby Island jams sell like hotcakes at farmers' markets.

But what are the challenges and opportunities for B.C. Gulf Island farmers and food producers to get their goods to market?

To find out, six undergraduates from the Faculty of Land and Food Systems (LFS) explored the nuts and bolts of local food distribution as part of their community service learning project. The student team focused on 13 Gulf Islands between B.C.'s mainland and Vancouver Island, along with Cortes and Quadra Island.

The project turned out to be a major highlight of their third-year “Land, Food and Community” course, say team members Victoria Elliot, Amanda Hunter, Keely Johnston, Kim Lucas, Catherine Montes and Brianna Stewart.

“Combining hands-on learning with research was an amazing experience,” says Hunter, a nutritional sciences major. “It gave me a better understanding of food marketing and I feel like I have an insider’s view.”

To gather data, the students sent out surveys to more than 100 farmers this past winter. They received a response rate of 30 per cent. Results showed that most of the farmers on B.C.'s Gulf Islands see a need for better food distribution.

Currently, the farmers sell their products mostly at the farm gate, followed by local farmers’ markets and retail outlets. Their most commercially successful products are vegetables, fruit, eggs and bottled products such as jams and pickles, along with meat products and hay.

“A major theme was the desire to

expand upon cooperative transport and food distribution networks through collective efforts,” says Lucas, a third-year dietetics student.

For example, 79 per cent of survey respondents expressed a strong interest in a growers association or co-operatives. Other recommendations include a transport system with central distribution points and warehouses, and a small-scale box program which requires consumers to pay the farmer a set price in the spring in exchange for a weekly box of produce through the season.

“Farmers are looking to sell their products more effectively, especially at off-island markets,” says Lucas. “However, they face major logistical barriers such as cost, marketing, time, regulations and ferry prices.”

As part of their project, the student

team also helped Don and Shanti McDougall, owners of Mayne Island’s Deacon Vale Farm, look further into their dream of starting a local store. The couple aim to sell their own and other farmers’ produce as well as grocery items and products such as chutneys and jams.

Applying theory to real-life situations was invaluable, says Stewart, who’s in the applied biology program. “We got to have conversations with people actually involved in the food system, outside of the university context. This project made me realize that I have a passion for the marketing side of food.” ●



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UBC Medical students **Baljeet Brar** (left) and **Nancy Yao** (right) are working with refugees upon their arrival to B.C.



Martin Dee Photograph

# Med students serve refugees

New arrivals are helping UBC students understand patient needs

By Brian Lin

**For first-year medical student Baljeet Brar, an unexpected lesson in practising medicine came from an unlikely source — new Canadians who have sought refuge in B.C.**

For the past six months, Brar has been assisting nurses at Vancouver's Bridge Clinic with Iranian refugee families who have arrived in the Lower Mainland via Turkey.

"Even though many of the patients don't speak English, and we communicate via a translator, I am amazed at how well we can express ourselves through gestures and facial expressions — and how much rapport we can build that way," says Brar.

"I have learned so much about the art of medical history-taking. I have learned how to let the patients express what is important to them. I'm also better able to rephrase questions using simpler language."

Each year, B.C. becomes the new home of approximately 2,000 refugees.

**"Few refugees speak English, some may be suffering from post-traumatic stress disorder and other psychological conditions . . ."**

The Bridge Clinic is one of their first stops. Here, after an initial screening, the newcomers are offered preventative and primary health care through the clinic. But due to the high costs of living, many refugees move on to other parts of B.C. and may not return beyond their first appointment.

"Few refugees speak English, some may be suffering from post-traumatic stress disorder and other psychological conditions, and family physicians can be reluctant to take on refugees as new patients," says second-year medical student Nancy Yao. "I felt that if more medical students have experience interacting with refugees and gain a better understanding of the dynamics and issues around caring for them, they would be more willing to take them on

as patients when they become family physicians."

Last year, Yao founded the History Taking Project with New Refugee Families at UBC after learning about programs in Ontario and Newfoundland that sends medical students to observe initial care of refugees. She approached nurses at the Bridge Clinic and soon began shadowing them — and taking on patients herself.

"My first intake was with a family of five," Yao recalls. "The father was Iraqi and the mother was East Indian. They had moved from Iraq to India and then to Canada, but only the eldest son spoke a little English."

"I was struck by how dramatically their environments had changed and yet they were eager to start school, to get on with life and move forward together as a family," says Yao.

"It taught me how resilient people can be when faced with unfathomable adversity."

An immigrant from China by way of Finland, Yao is no stranger to adapting to new environments and negotiating cultural differences. While there are similarities, Yao says providing care to refugees takes on added dimensions from those of immigrants.

"You place higher emphasis on basic needs — food and nutrition, for example — as well as issues that may be unique to this population — infectious diseases, psychological disorders and dental hygiene," she says.

"I'll never forget how excited some kids got over the prospect of having their own free toothbrushes," she recalls. "For some of them, this was symbolic of the better life they were hopefully about to embark on in this new country."

The Bridge Clinic currently only has capacity to take on two students at a time, once a week, but Yao is working with two other clinics in Metro Vancouver in hopes of expanding medical student participation. Until then, Yao and Brar are developing training material for their peers so they can share their knowledge and insight.

"It's been amazing to meet some of the refugees who have lived through such difficult circumstances, but yet are ready to start fresh with hope," says Brar.

"The experience has been invaluable," says Yao. "And I have no doubt it will make me a better doctor and a better person." ●

# Turning your genes on and off

Researchers of the GECKO Project lead the first study of how life experiences shape who we are

By Heather Amos

Tom Boyce and the team of GECKO Project researchers take their lab on the road, visiting families across the Lower Mainland to learn how life experiences affect our DNA.



**By decoding our DNA, the Human Genome Project was supposed to give us a tool to explain who we are as individuals. We thought our genetic code could tell us everything: where we came from, what we looked like and our susceptibility to diseases.**

The project didn't quite live up to our expectations. It succeeded in unraveling three billion pieces of DNA and it found that humans have 23,000 genes, but those genes are far more complicated than we thought.

"Each gene has its own dimmer switch, like a light bulb dimmer, to regulate the amount of protein produced from it," says Michael Kobor, an assistant professor in the Department of Medical Genetics at UBC and with the Centre for Molecular Medicine and Therapeutics (CMMT). "Genes can be turned all the way on or

all the way off, or can be set anywhere in between."

Research has shown that genes get turned on or dimmed down in part because of a chemical reaction called methylation, where groups of carbon and hydrogen atoms are added to the DNA within a person's cells. Research has also shown that a person's life experiences play a role in DNA methylation, but no one knows how specific experiences shape our DNA and who we are as individuals.

UBC researchers are working on the first project to understand this connection. The Gene Expression Collaborative for Kids Only or GECKO Project is one of a series of studies led by Kobor and Tom Boyce, a professor in the Human Early Learning Partnership (HELP) and Department of Paediatrics, that involve researchers across campus

**"We're trying to find out how environmental and social experiences literally get under your skin and stick with you for a long time."**

and from universities around the world.

The GECKO project focuses on children between the ages of seven and 11. According to Boyce, 15–20 percent of children in any population is responsible for more than half of childhood illnesses and more than half of paediatric health care use. These children are more susceptible to injuries and common illnesses like colds but also more susceptible to major behavioural problems and mental health issues later in life. Other children will have none of these problems.

"We're trying to understand why there is such great unevenness in children's

illness experiences," says Boyce. "The differences among children's life experiences and risks for physical and mental health problems are the basis for this study."

The GECKO team is recruiting 400 children from across the Lower Mainland for the study. The researchers drive their GECKO van, or mobile lab, to a child's house to collect a DNA sample and conduct a series of tests to measure how a child responds to stress, their brain activity and development. Meanwhile, the child's parents are interviewed for information about the child's life experiences and the family's

# outtakes

## Reflections on academic life

A close encounter with a prince

By Brian Lin



Photograph courtesy of Rashid Sumaila



Martin Dee Photograph

**Prince Charles** (far left) with **Rod Fujita** (left) of the Environmental Defense Fund, California and UBC Researchers **Rashid Sumaila** (centre) and **Daniel Pauly** (right).

### What is it like to have one of the most famous people in the world not only know your work, but cite it in front of the movers and shakers in your field?

UBC fisheries economist Rashid Sumaila knows that feeling first-hand after Charles, the Prince of Wales, mentioned his research on harmful government fisheries subsidies at a meeting with about 60 representatives from the United Nation, the World Bank, academia and the private sector.

Sumaila was joined by fellow UBC fisheries professor Daniel Pauly and economics professor emeritus Gordon Munro at a March 2010 workshop hosted by Prince Charles at St. James Palace. They were among only eight academics invited to provide feedback on Prince Charles's efforts to protect the world's oceans through the Prince's Charities' International Sustainability Unit (ISU).

Over one and a half days, the participants reviewed the ISU's Draft Consultative Document, provided feedback and explored opportunities for collaboration across sectors. The Prince then met with subgroups and gave closing remarks.

"In his closing remarks he mentioned our subsidies work, saying: 'It's really unfortunate that the world is paying \$16 billion of bad subsidies a year to overfish, and in the process losing out on \$50 billion annually in potential economic benefits,'" recalls Sumaila.

"Then he called us out! He said: 'Scientists in this very room made this estimate.'" Then came the close encounter.

### "Tell me," the Prince pressed, "which countries are causing the biggest problems? If you tell me, we'll invite them to the Palace and we'll have a chat."

During subgroup discussions, Prince Charles remarked to Sumaila, Pauly and Munro: "You guys are doing the subsidies work. This is really good material."

"Tell me," the Prince pressed, "which countries are causing the biggest problems? If you tell me, we'll invite them to the Palace and we'll have a chat."

Sumaila is no stranger to rubbing shoulders with royalty. He attended a similar event with Prince Albert II of Monaco in 2008. But if he had to pick favourites, Sumaila says, the British prince wins out for doing his homework.

"Both of them care a lot about the environment," says Sumaila. "In terms of depth of knowledge, Prince Charles clearly came out ahead."

"He was quite humble, really open to learn and share his knowledge. I saw in him a great champion in helping humanity avert further depletion of ocean fish resources." ●

socioeconomic status.

Socioeconomic status is the single most powerful predictor of health, says Boyce. It's also known that stress and socioeconomic status are closely related and that children who experience more mental and biological illness have more problems with stress. These problems often last a lifetime and will hinder academic achievement and acquisition of cognitive skills.

"We're trying to find out how environmental and social experiences literally get under your skin and stick with you for a long time," says Kobor.

When the DNA is collected, it is sent to Kobor's lab for analysis. GECKO is one of six projects that are part of a "constellation of studies" and Kobor's lab is at the centre of it all.

Kobor's team is assessing the amount of DNA methylation at 480,000


different sites on each person's DNA. When the project was launched about four years ago, the technology was still developing and the lab had planned to look at only 1,500 sites.

"The technology is much more advanced now," says Kobor. "With 480,000 different sites, we're covering nearly all human genes."

The benefit of looking at so many sites is that the researchers don't single out any specific genes to study; they'll let the data tell them what is important.

"We're studying children's vulnerability at a deeper level than ever before," says Boyce. "We want to know why some children experience so much in the way of affliction and illness, so that ultimately we can develop new interventions." ●

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