



a place of mind
THE UNIVERSITY OF BRITISH COLUMBIA

UBC REPORTS

July 2012

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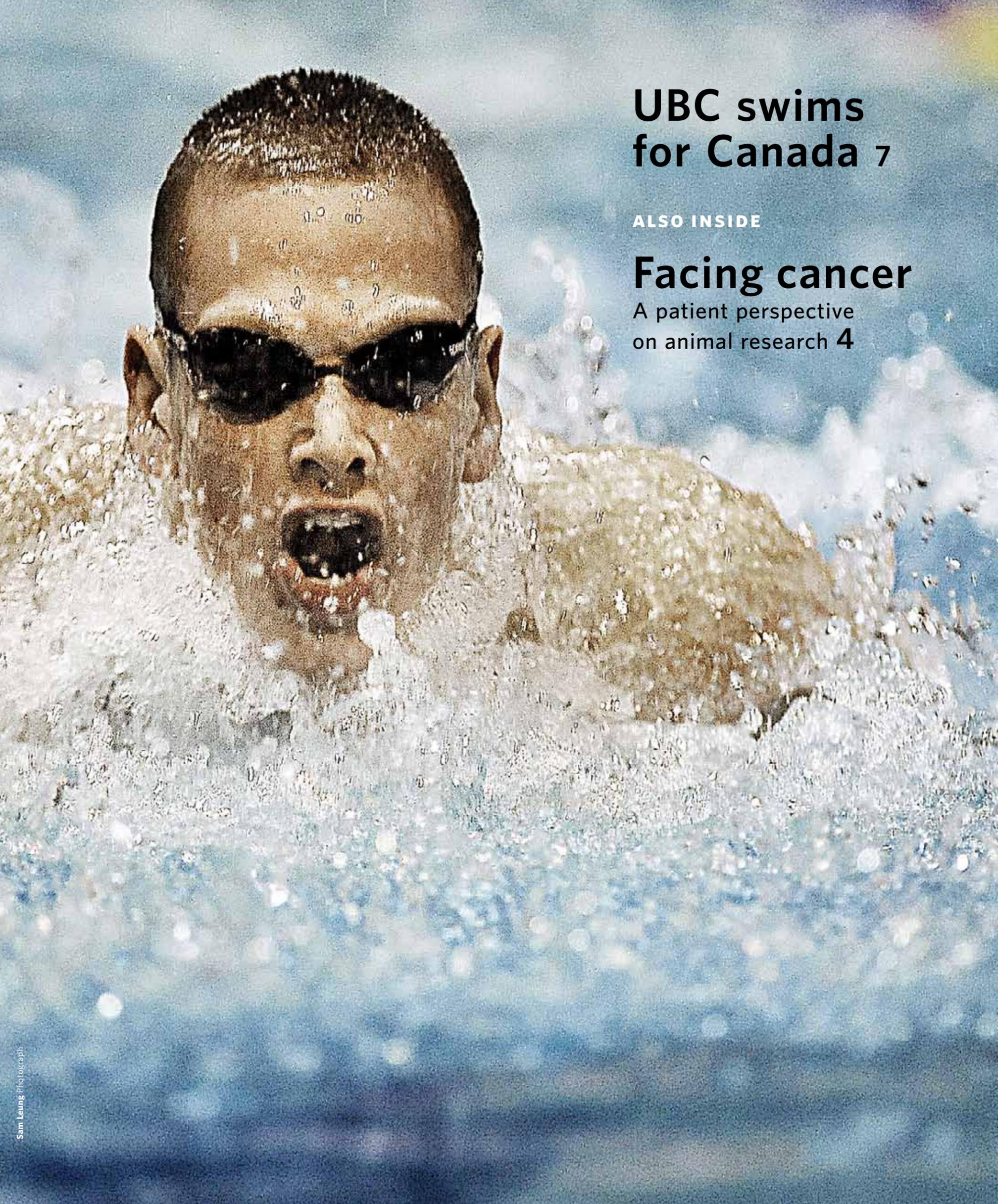
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UBC REPORTS

VOLUME FIFTY EIGHT: NUMBER SEVEN
WWW.PUBLICAFFAIRS.UBC.CA/UBC-REPORTS

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UBC Reports is published monthly by:
The University of British Columbia
Public Affairs Office
310-6251 Cecil Green Park Road
Vancouver BC Canada V6T 1Z1

Next issue: 6 September 2012

Submissions

UBC Reports welcomes submissions.
For upcoming UBC Reports submission guidelines:
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Publication mail agreement no. 40775044
Return undeliverable Canadian addresses to circulation department,
310-6251 Cecil Green Park Road, Vancouver, BC Canada V6T 1Z1

Cover: Swimmer Tommy Gossland

a place of mind
THE UNIVERSITY OF BRITISH COLUMBIA
Public Affairs

Highlights of UBC media coverage in June 2012

Heather Amos

Japanese Canadians receive honorary degrees

UBC held a special graduation ceremony to award honorary degrees to former Japanese Canadian students who were forced to leave the university and the Pacific coast with about 21,000 other Japanese Canadians during the Second World War, reported *Al Jazeera English*, the *Globe and Mail*, *CBC's The National*, *CTV BC* and others.

"It (the degree) doesn't mean anything to me economically or academically," said 89 year-old **Mits Sumiya**, one of the day's graduates, "but it does finally make me feel welcome at a place I've always considered my school—UBC."

The ceremony is part of a broader initiative that includes collecting personal accounts from Japanese Canadians about what happened 70 years ago and developing education programs.

New moons for Jupiter

Astronomers from UBC have discovered two small moons of the planet Jupiter, bringing the total number of known Jovian moons to 67, reported the *Australian Broadcasting Corporation*, *Daily Mail*, *MSNBC*, *Huffington Post* and others.

One of the moons, named S/2010 J2, is estimated to be just two kilometres in diameter, and may be the smallest moon in our solar system ever observed from Earth, according to UBC PhD student **Mike Alexandersen**.

"It was exciting to realize that this [S/2010 J 2] is the smallest moon in the solar system that was discovered and tracked from Earth," he said.

Blue Planet Awards

UBC ecologist **William Rees** and his former doctoral student **Mathis Wackernagel** have been awarded the Blue Planet Prize at the Rio+20 Conference in Brazil, reported the *National Geographic*, *Vancouver Sun* and the *Province*.

Rees and Wackernagel were recognized for developing the Ecological Footprint concept in the early 1990s, which has become an influential measure of economic and human sustainability.

UBC welcomes letters from students, faculty and staff at www.letters.publicaffairs.ubc.ca

LETTERS

In the last issue of UBC Reports, several UBC students and a faculty member submitted a letter to the editor sharing their views on the recent Green College series on animal research.

The letter raised a number of questions on governance but omitted a key issue that was vigorously debated during the series: the basic need for animal research in order to understand animal physiology, species conservation, or the mechanisms of disease and injury. In the debate, several UBC scholars pointed out that researchers enthusiastically adopt non-animal methods whenever they become available, because animal studies are expensive, complex and time-consuming. However, these methods cannot yet replace animal research. The letter to the editor fails to address a fundamental question of the debate: if we want new medicines and treatments to alleviate human and animal suffering, how will this be possible without animal research, given that there are currently no viable substitutes for a complex living organism?

The authors of the letter also question Canada's system of funding research, which they say may "channel researchers towards the use of animals, including for reasons other than social benefit." As a career scientist, I am offended by the implication that scientists conduct animal studies for anything other than highly ethical reasons. They also ask why Canada, "unlike other countries, lack[s] systematic review to prevent unnecessary repetition of research projects on animals" and whether proposed animal research should be assessed by peer researchers who use animals—implying that all animal researchers are somehow in collusion. We are not.

Peer review by acknowledged experts is the universal gold standard in any academic discipline for determining whether a proposed research study addresses important questions, is rigorous and feasible, and should be approved for funding. Furthermore, peer reviewers operate according to established rules that eliminate conflicts of interest. In my view, a system of peer review by experts who have invested their academic careers in animal research should remain the cornerstone principle governing animal research at UBC.

UBC has made a commitment to leading an initiative to evaluate and explore opportunities to enhance Canada's and our own institutional governance and oversight of animal research. We encourage all members of the UBC community to provide input.

Helen Burt, Faculty, Associate Vice President, Research and International



Jody Jacob Photograph

What's lurking in your pool?

PhD student investigates what all those chemicals could be doing to swimmers

Jody Jacob

Engineering PhD student **Roberta Dyck** wants to ensure public swimming pools offer the healthiest environment possible to swimmers and workers.

Engineering PhD student Roberta Dyck is a woman with a mission—making swimming pools safe for all from the dreadful-sounding disinfection by-products (DBPs).

"All water—including drinking water—has naturally occurring organic materials, which can originate from leaves and other vegetation, that react with chlorine to produce chemicals called DBPs," explains Dyck. DBPs in drinking water have been associated with health risks such as cancer and reproductive disorders.

"This is why Health Canada has established guidelines for DBPs in our drinking water that aim to minimize any potential adverse health effects," she says. "But in most countries we don't have similar regulations in place

for swimming pools, where chlorine is not only reacting with the naturally occurring material resulting from source water, but also with what swimmers bring into the pool with them—sweat, urine, perfumes, hairspray, deodorant and skin excretions, to name a few."

Dyck has developed a way to estimate the total exposure of DBPs—specifically trihalomethanes (THMs)—in both the air and water for swimmers and people who work at the pool.

The model was developed using data previously collected from samples taken from 15 different swimming pools in Quebec City by researchers at Laval University, as well as data—air and water concentrations for five pools in Italy—provided by Italian researchers.

The model examines the process and rate THMs enter the human body—dermal absorption, ingestion and inhalation—for five different age groups and estimates total exposure for individuals, taking into account a range of concentrations and other variables.

For example, the model could estimate the total annual or lifetime exposure of THMs for a three-year-old child, weighing 35 lbs, who swims twice a week for one hour a day.

One of the most significant findings, says Dyck, was that for total exposure, children aged 1-4 have up to six times the exposure of other age groups. The results of this research have been published in the journal *Water Research*. "Many swimmers using indoor public pools are children, pregnant women and

seniors, who may be at greater risk for health effects from chemical exposures in swimming pool water; therefore, it is important to quantify the associated exposure and risk," says Dyck.

"In the future, the model will allow us to perform a health risk assessment and develop strategies that minimize DBP exposure without compromising disinfection efficiency. It's important to remember that chlorination is necessary to protect swimmers from pathogens in the water. But we also need to better understand the effects, and how to manage them."

Some risk management strategies could include the development of health-based guidelines for disinfection practices and policies, as well as optimizing the design of ventilation and

filtration systems for swimming pools.

With the model validation complete, Dyck is now looking at what happens to DBPs once they enter into the human body.

Dyck's research is funded by NSERC, and supported by Rehan Sadiq, associate professor of engineering at UBC's Okanagan campus and Manuel Rodriguez from Université Laval. The research is an international collaboration with contributions from Guglielmina Fantuzzi, Elena Righi and Gabriella Aggazzotti from the University of Modena, Italy, and Robert Tardif from the University of Montreal. ●

Facing cancer

Lived experience reaffirms the role of animals in life-saving science

Brian Lin

Articles on this page are the second of a multi-part series on the use of animals in research.

The June edition profiled basic science studies, this edition discusses medical research, and upcoming editions will review animal welfare programs and governance.

When Martin Kirk came down from the high of hosting a national conference as the newly elected president of the Canadian Association of University Research Administrators last year, he had no idea how low life was about to get.

“I had some flu-like symptoms and the left lymph node on my neck was a little swollen, but I figured it was something I picked up on the plane,” recalls Kirk, director of UBC’s Office of Research Services (ORS).

When his lymph node continued to swell, he went to see his doctor and within 30 minutes, was undergoing Doppler ultrasound to confirm the doctor’s suspicion.

“That was the start of a cascade of horrible events,” says Kirk, who was diagnosed with an aggressive case of non-Hodgkin lymphoma in May 2011 and immediately underwent surgery, followed by chemotherapy. Radiation treatment began shortly after his 50th birthday in September.

“When my doctor told me I had lymphoma, it felt like I was being handed a death sentence with a slight chance of parole,” he says. “The only thing I could think of was my two young boys, who needed a dad.

“I just wanted to survive.”

An estimated 40 per cent of women and 45 per cent of men will experience some form of cancer in their lifetime. Non-Hodgkin lymphoma is the fifth most common cancer. While the survival rate is fair for patients under 60, the odds drop dramatically after age 60.

“There is no upside to being told you have cancer,” says Kirk, “but British Columbia is probably one of the better places to be diagnosed because we have some of the best lymphoma experts right here.”

Kirk knew the caliber of cancer research at UBC, which received approximately \$72 million in funding related to cancer research in 2010/11. His office manages approval of research protocols and as director of ORS, Kirk signs, on behalf of the university, research agreements to initiate funding from granting agencies.

He credits Rituximab, a powerful chemo drug used for the treatment of lymphoma, leukemia, transplant rejection and some autoimmune disorders, for saving his life (see sidebar). He was also treated with RapidArc, a targeted radiation therapy, to “zap” the cancer in his neck lymph node while preserving healthy tissue nearby, thus sparing him of potential lifelong side effects from damage to his thyroid and saliva glands.

“I have always believed in the importance of research to civil society,” he says, “and I had an intellectual understanding of the link between research and the best available treatment – and ultimate survivability – of patients.

“I survived as a direct result of



Courtesy Martin Kirk Photograph

Martin Kirk credits RapidArc radiation therapy for zapping his lymphoma while sparing healthy tissue.

research,” says Kirk, who returned to work earlier this year and has been cancer free since January 2012. “My appreciation now is much, much deeper.”

Like all drugs and therapies, Rituximab and RapidArc were required by law to first be tested on animals before proceeding to human clinical trials, and before finally receiving approval as clinical treatments in hospitals.

While advanced computing and imaging technologies have reduced the number of animals used in research, cancer and other complex diseases cannot be studied in a Petri dish or on computers alone. No drug or therapy can be used to treat humans without first being trialed for efficacy and safety on animals.

As an administrator intimately involved in the research process, Kirk says there is no questioning the level of care and respect afforded to animals that are involved in research.

“There are never any shortcuts when it comes to approving animal research at UBC,” says Kirk, who sat on the Canadian Council on Animal Care from 2000 to 2003, and is responsible for post-approval monitoring of animal research protocols at UBC.

“Researchers must provide the best care possible because it’s critical to the integrity of the science, which is ultimately what every researcher is judged on. And good science is the foundation of effective, life-saving treatments.”

Kirk agrees the research community

has a responsibility to better communicate why and how research is conducted, especially when it involves the use of animals. Still, he says he’s living proof the work is indispensable.

“There is a necessary cost that comes with developing new knowledge. But the system we have—which includes peer review of scientific merit of all studies, the fierce competition that awards funding to the best scientists, and multiple safeguards in place to ensure the ethical and humane treatment of animals—is very solid.” (See sidebar)

Kirk says his goal is to ensure the process runs smoothly and effectively at UBC, but “at the end of the day, my number one job is being a dad to my kids.” ●

“When my doctor told me I had lymphoma, it felt like I was being handed a death sentence with a slight chance of parole.”

Cancer research involving animals

The principles of modern cancer chemotherapy originated from a 1973 study using mice that showed a single malignant cell could divide and eventually form enough cells to kill the host—showing it’s vital to destroy every affected cell, and that the earlier the treatment can begin, the better the chances of survival.

The importance of early treatment has also guided research that resulted in earlier diagnosis of cancer.

Chemotherapy, bone marrow transplants, and newer stem cell and antibody treatments (see Rituximab sidebar at right) for leukemia, non-Hodgkin lymphoma and other cancers of the blood, were also developed through the use of mouse models.

Since the early 2000s, the zebrafish has been used to study the genetic aspects of cancer development and potential treatments. While its genome is only half the length of that of humans, zebrafish’s genetic structure is very similar to that of humans, including genes responsible for human diseases.

In 2003, scientists fused *Myc*, a gene that plays an important role in human leukemia and lymphoma, to a zebrafish gene that works in lymphoid cells. This fused gene was then tagged with another gene that caused leukemia cells to glow green under fluorescent light, thus enabling observation of the cancer as it progressed. The technique has enabled researchers to monitor thousands of genes for mutations that contribute to the disease and to test anti-cancer agents. ●

Rituximab: A mighty mouse treatment

Approved in 1997 by the U.S. Food and Drug Administration for use in treatment of Non-Hodgkin lymphoma, Rituximab has since been used to treat leukemia, transplant rejection and some autoimmune disorders characterized by too many or dysfunctional B cells.

Rituximab works much like an antibody, in that it attaches itself to a protein on the surface of B cells called CD20 and “flags” them for the body’s immune system to eliminate. Rituximab is a mix of a mouse antibody that was found to be particularly effective at binding to CD20 and a human antibody that interacts effectively with the human immune system.

Prior to human clinical trials, Rituximab was tested in macaque monkeys, which have a constant level of antibodies like humans do. Researchers found that the number of B cells in the monkey’s bloodstream fell dramatically after administration of the drug—as did in the bone marrow (where B cells are produced) and in the lymph nodes (where B cells are activated). But B cell levels recovered in the weeks following—this is important because B cells are vital to a healthy immune system.

More recently, Rituximab, when used with methotrexate, has been shown to slow the progression of rheumatoid arthritis. ●

“Researchers must provide the best care possible because it’s critical to the integrity of the science, which is ultimately what every researcher is judged on.”

UBC welcomes letters from students, faculty and staff on this topic at www.letters.publicaffairs.ubc.ca

Multiple approvals and safeguards

The animal research process involves a series of steps designed to ensure scientific value, humane care and compliance with regulations.

Funding agency approval

Proposals are first submitted to funding agencies for scrutiny by independent panels of experts. Only if the proposed investigation is deemed to be a significant contribution to scientific knowledge will funding be granted.

Institutional approval

Once approved for funding, UBC’s Animal Care Committee reviews all aspects of the project, including ethics and the use of animals. Researchers must demonstrate animals are necessary to achieve research goals, that all feasible alternatives have been considered, and that the project conforms to 3Rs principles of animal use: replace, reduce and refine. If approved, the Committee issues a compliance certificate and funding is then initiated.

Monitoring and training

UBC veterinarians, members of the Animal Care Committee and senior administrators continuously monitor approved projects to ensure humane care and compliance with regulations. Researchers and lab workers must pass mandatory training in animal care.

Continued review

The Animal Care Committee reviews animal research projects annually. Researchers are also required to submit renewed proposals to the Committee for full protocol review every four years.

Published research

When a project is completed, research findings and methods are published in peer-reviewed scientific journals that can be accessed by other experts in the field and the public.

Animals in UBC medical research

In 2010, 211,604 animals were involved in scientific research at UBC.

Approximately 27 per cent of the animals were involved in medical studies to shed light on the causes and potential treatments for human or animal diseases and disorders.

Under Canadian law, all potential drugs and treatments must first be tested on animals before human clinical trials are allowed. Approximately one per cent of animals involved in research at UBC were part of this kind of study.

For more information, visit: www.animalresearch.ubc.ca.

UBC'S OLYMPIANS

'I can't believe it's actually my life'

Medal hopeful **Tera Van Beilen** is ready to surprise everyone

Gudrun Jonsdottir



Don Ehhardt Photograph



Richard Lam Photograph

UBC Olympians and Paralympians at an Olympic send-off celebration (left to right) **Inaki Gomez, Donovan Tildesley, Scott Dickens, Tera Van Beilen, Tommy Gossland, Savannah King, Brent Hayden** and **Heather MacLean**.

Tera Van Beilen, bottom second from right, is part of a UBC swimming team heading to London. Top (left to right): **Scott Dickens, Tommy Gossland, Brent Hayden** and coach **Tom Johnson**. Bottom (left to right): **Martha McCabe, Savannah King, Tera Van Beilen** and **Heather MacLean**.

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- Scott Dickens** (confirmed) Swimming—100 & 200 Breaststroke, 4×100 Medley Relay
- Brent Hayden** (confirmed) Swimming—50 & 100 Freestyle, 4×100 Freestyle Relay, 4×100 Medley Relay
- Tommy Gossland** (confirmed) Swimming—4×100 Freestyle Relay
- Savannah King** (confirmed) Swimming—400 & 800 Freestyle
- Heather MacLean** (confirmed) Swimming—4×100 Freestyle Relay
- Martha McCabe** (confirmed) Swimming—200 Breaststroke
- Tera Van Beilen** (confirmed) Swimming—100 & 200 Breaststroke
- Donovan Tildesley** (confirmed) Paralympic swimming
- Toby Ng** (confirmed) Badminton
- Inaki Gomez** (hopeful) Track & Field—20 km Racewalk
- Mike Mason** (hopeful) Track & Field—High Jump
- Liz Gleadle** (hopeful) Track & Field—Javelin
- Ricardo Montemayor** (confirmed for Mexico) Sailing—Laser Class
- Luke Ramsay** (confirmed) Sailing—470 class
- Mike Leigh** (confirmed) Sailing—470 class
- Denise Ramsden** (confirmed) Road Cycling—Timed trials and road race

Tera van Beilen has been getting multiple interview requests a week since she made the Canadian Olympic swimming team four months ago. That was days after her 19th birthday. "People even ask me for autographs," says Van Beilen, one of UBC's student-athletes going to London this summer. "It's all so crazy and surreal, I can't believe it's actually my life."

Van Beilen came to UBC last year to study kinesiology and to swim. Even though she now considers herself a UBC athlete, she will always be a representative of her hometown of Oakville, Ontario. "It's kind of weird, they kind of just want to own me everywhere," she says.

Her swim for an Olympic medal

wasn't supposed to happen this year and for that, she credits UBC.

"It's really all thanks to training with my coach Jozsef Nagy and being in the Aquatic Centre here in Vancouver," says Van Beilen, who notes that UBC's reputation as a swimming powerhouse is living up to her expectations.

The life of a world-class swimmer has its ups and downs, as Van Beilen describes her daily routine just weeks before the big event. Four times a week she has practices early in the morning, around lunchtime and in the evening; in between, she naps.

"It's a lot of hours a week. I don't bother to count because it makes me feel like I'm crazy."

At the end of the day, her love for

swimming, and seeing how far she has come, helps her drag her feet out of bed every morning. "I have a bigger goal in mind," she says.

Competing at the Olympic level has given Van Beilen experiences that most people will never have. "Sometimes when I'm on the blocks in Australia, Europe or China, I think to myself: 'am I actually in this country swimming? I have such a crazy life,' and then the beeper goes and it is time to focus."

Now the big event is just around the corner for Van Beilen, who is still unsure whether both her parents will get to watch her living her dream. She has only received one guest ticket to her events thus far.

"When I think about both my swim

events being sold out, it makes me a little freaked out," she says.

When Van Beilen steps into the spotlight in London, it won't just be the 17,000 spectators watching, it will be the whole world. That's a lot of pressure for a newcomer.

"I always swim well under pressure. I like the adrenaline. Nobody knows who I am so I can use that to my advantage; I can surprise them all." ●

What to expect at London 2012

A Q&A with UBC Olympic Games researcher **Rob VanWynsberghe**

Heather Amos

What makes this Olympic Games special?

This might be one of the last times that you see a world-class city hosting the Olympic Games. If you go back to the bid phase for 2012, it was New York, Paris and London. At the time, everyone thought that the Olympic Games were going to be the bastion of world-class cities but that hasn't happened.

The Olympics is like a brand. If you want to spread that brand, you go to places where that brand hasn't received as much exposure, like Brazil. You are able to associate the Olympics with fostering this economy.

What makes London particularly special this year is that the Olympics come on the tails of the Queen's Diamond Jubilee. Together this is going to be one massive party for London and it will be exciting to watch how the Olympic spirit affects the city.

"Anyone who has one grandma who is British will be tuning in."

What are the issues to watch as London plays host to the 2012 Games?

London has a grassroots group—a lot like Vancouver—who are concerned about the amount of money being spent on the Games—probably close to \$20 billion. London began outreach immediately to address some of the concerns people were having.

London has refurbished the Five Boroughs area for the Games—an area that typically houses lower and middle-class workers. It was a stroke of genius to use the Games as an opportunity to provide new living spaces for this group. This ties together the kinds of things that the Games typically do in terms of infrastructure and housing but for a sector of the population that has historically been marginalized.

It seems like there is always local opposition to the Olympic Games. How likely is it that we will see protests of some kind in London?

I will be surprised if there are no protests in London. With the city's history, the amount of money being spent, and the economy the way it is, I'd be really surprised if nothing happened.

Typically there is a period where there is opposition and protest but then as you get closer to the actual event, there are concerns about the city embarrassing itself while the world is watching. The patterns that we see emerge over and over again are that for the period of hosting the actual event, there is no protest.

The other thing is there are massive economic changes going on in the



Rob VanWynsberghe led the 2010 Olympic Games Impact study and has been watching the London Games approach.

country, including some belt-tightening in the area of higher education. If you look at the student protests in Montreal right now and then consider the fact that the U.K. is in the process of raising tuition fees to exorbitant levels, closing university and college programs, and professors' jobs are being threatened, you could see some protests from that sector. To see the higher-education sector involved would be fairly unprecedented in terms of sport mega-events.

You've been studying the economic, social and environmental impacts of the 2010 Games in Vancouver. What will be some of the impacts of hosting the Games in London?

London intended that the major legacy would be around physical activity—they've put a lot of money toward it. With the Games so close, there are already discussions about why they haven't had the kinds of impacts they wanted to have in terms of raising levels of physical activity across the country.

What are some of the major differences between hosting a Winter Olympics and a Summer Olympics?

The summer Olympics involve a lot more athletes and a lot more countries so perhaps it is more truly international. That international flavour will fit nicely into the multicultural framing of London.

I think London will try to overcome some negative images that Vancouver never had to. The city is associated with being expensive, dirty and having a lot of racial strife. But it is one of the most important cities in the world and there seems to be so much support for the country. Anyone who has one grandma who is British will be tuning in. It'll be hard for London to lose on this.

Personally what fascinates you about the Olympics?

What fascinates me as a researcher above all is the mobilization of resources. It's like a crisis; it's like a war. I'm just fascinated by how people come together and they pull something off in a very short time by collaborating. On the personal side, I like the fact that emotion sneaks up on me when I'm not expecting it. You're suddenly vying for an athlete that you didn't even know and you feel fuzzy. Those things are humanizing and interesting. ●

Not your backyard badminton

UBC Olympian relies on strategy and cat-like reflexes

Basil Waugh



UBC student **Toby Ng** will be competing in mixed doubles in badminton at the 2012 Games.

University of British Columbia student Toby Ng is approaching the 2012 London Summer Olympics like it is biggest exam of his life.

"When I study really hard for a test, I just want to write it and prove myself," says the 27-year-old Team Canada badminton player. "That is what I'm like with these Olympics. I have worked so hard to prepare that I am just really eager to compete."

The London Games will conclude a grueling qualifying period that saw Ng play more than 100 matches in 19 countries over 24 weeks. But with recent titles at the Canadian Nationals and the Pan Am Games, the third-year kinesiology student is peaking at the right time, jumping in international rankings to as high as 22nd in the last year.

To prepare for London—and the U.S. and Canadian Opens that precede it—Ng travelled to South Korea to train with two-time Olympic medalist Kim Dong Moon, who has served as Ng's mentor since 2007. "Kim is a badminton legend," says Ng. "Getting to learn from, live with, and spend time with him has been so important for my career, and such an honour."

Ng—who trains twice a day, six days per week—will compete in Olympic mixed doubles with his partner Grace Gao, who is coached by another of Ng's mentors, former Canadian Olympian Darryl Yung. When badminton competition begins on July 28, watch for Ng to use his killer "jump smash"—(like a "spike" in volleyball), hard flat "drives" and cat-like reflexes on defense.

Known as a strong tactician, Ng creates game plans for opponents by watching videos for their tendencies and habits. "The game is so fast and people are so skilled that strategy can really be the difference," says Ng, who applies lessons from a UBC statistics class he took to analyze the likelihood of particular shots. "You can't always expect to overpower everyone with smashes, you need to mix up shots, anticipate opponents, and jump on their mistakes."

Calling his family and his girlfriend "his biggest fans," Ng credits his parents for introducing him to badminton at age six. "There was my mom and dad, my little brother and I, and we would play doubles together," says Ng, who entered the national system at age 15 and has competed internationally since his early 20s.

When the 27-year-old seeks inspiration for the ups and downs of sport, he looks to Canadian Paralympic boccia (like bocce) player Josh Vander Vies, who was born with no arms and no legs. "Josh is a definite role model for overcoming adversity," says Ng, adding that he also looks to his Olympic teammates, friends and family for inspiration and support.

Ng applies lessons from a UBC statistics class he took to analyze the likelihood of particular shots.

In his downtime, Ng stays connected to friends and family online. He posts updates, photos and videos of his matches and adventures on his blog (<http://towbss.blogspot.ca>), Facebook and YouTube. He is a fan of Eminem, old-school hip hop, and TV shows such as House M.D., Dexter, Sherlock Holmes and The Simpsons. And when his girlfriend doesn't travel with him, they meet online to play videogames together.

After the London Games, Ng hopes to qualify for the 2014 Glasgow Commonwealth Games, the 2015 Toronto Pan Am Games and the 2016 Rio Olympics. As for life beyond badminton, Ng is studying for the Medical College Admissions Test, or MCAT, and hopes to enter medicine or physiotherapy after his kinesiology degree.

"The Olympics are truly another level for me," says Ng. "I don't consider myself special, and I feel really fortunate to do what I love. I hope everyone realizes that the world is full of possibility. I guess I am proof of that." ●



Congratulations to our UBC Olympians

UBC athletes have a strong tradition of winning medals for Canada. Students, faculty, staff and alumni are cheering on UBC athletes who have worked hard to represent Canada for the 2012 Games in London.

www.ubc.ca/news



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THE UNIVERSITY OF BRITISH COLUMBIA

A javelin's throw away from the Olympics

Ashley Castellan



Richard Lam Photograph

UBC student and Olympic javelin hopeful aims to secure a spot on Team Canada.

If this is what it means to throw like a girl, the line of boys waiting to take lessons from javelin thrower Liz Gleadle will stretch for miles.

By the time you read this, she may be on her way to the London 2012 Olympic Summer Games.

The 23 year-old UBC human kinetics student recently set a new personal best, and a new Canadian record, with a throw of 61.15 metres at the Harry Jerome Track Classic in Vancouver on June 10.

Now, the only thing that stands in the way of her Olympic dream is a top three finish at the Canadian Track and Field Trials taking place in Calgary June 27-30. If she qualifies, she will be the first Canadian female javelin thrower to compete in an Olympic Games since 1988.

Not bad for a girl who picked up the sport in her high school gym class.

Still, it hasn't been all fun and games. Gleadle has worked hard in the last year to gain a competitive edge, moving to Lethbridge, Alberta and away from her family, in order to train.

"I gave up a lot of my social life. I moved from a tight-knit community where I had lots of friends to a place where I know nobody," said Gleadle. "It's been hard not to have the same support as you do when you're at home.

"But at the same time, it had the biggest impact on my training. Instead of going out at night, you have a shower, go to bed and get enough sleep so you're not too tired."

While her training has certainly strengthened her body, it's also helped

to toughen up her mind. This is a young woman who sets goals and knows what she wants.

"I'd like to set a personal best and truly perform well," said Gleadle in anticipation of her Olympic debut. "You always think this is really fantastic and you're really excited, but it's about more than that. Canada sends athletes to have a strong showing."

If all goes according to plan, Gleadle will be joined by two other track athletes with ties to UBC.

International relations graduate Inaki Gomez hopes to qualify in the men's 20 km race walk. Gomez, who is currently ranked number one in Canada, has represented the country in a number of international events, including the 2010 Commonwealth Games in Delhi, India.

This would be his first Olympic Games.

Also hoping for a berth on Team Canada is Olympic veteran, Mike Mason. A high jumper, Mason graduated from UBC with a degree in human kinetics. He is currently ranked number one in Canadian men's high jump, and is expected to qualify with ease.

Like Gleadle, both Mason and Gomez need a top three placement in their respective sport in the Canadian Track and Field Trials taking place between June 27-30 to qualify for the London Olympics. ●

UBC Olympic and Paralympic history

DATES

1928

UBC first participates in an Olympic Games when track and field athlete Harry Warren competes in Amsterdam

1932

UBC wins its first medal at the Olympics when Ned Pratt brings home a bronze in doubles rowing

1956

UBC's four-oared rowing crew brings home Canada's first-ever gold medal from the Melbourne Games

MEDALS

64

total number of medals won by UBC Olympians: 19 gold, 21 silver and 24 bronze

55

total number of medals won by UBC Paralympians: 24 gold, 13 silver and 17 bronze

16

UBC's most decorated Paralympian Walter Wu has won 16 medals in swimming, including 8 gold

4

UBC's most decorated Olympian is Kathleen Heddle with three gold and one bronze in rowing

UBC Rowing

The UBC rowing program began in 1921, competing alongside members of the Vancouver Rowing Club, based at Stanley Park's clubhouse.

Eighty-one years after its inception, UBC rowing is the most decorated varsity athletic program in Canada. Rowers from UBC have amassed 44 Olympic medals, and numerous accolades at the Can-Am games, Commonwealth Games, World Championships and Royal Henley Regatta in Oxfordshire, England.

Rower Ned Pratt holds the distinction of being the first UBC athlete to bring home a bronze medal from the 1932 Games in Los Angeles.

In the 1970s, UBC organized a women's rowing team that ascended quickly to the top of the ranks. At the 1992 Games in Barcelona, men's and women's teams from VRC/UBC combined for 9 gold medals.

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Hula power

Traditional dancing connects researcher to her language

Heather Amos



Martin Dee Photograph

From Hawaii, **Candace Galla** is teaching and studying indigenous language revitalization at UBC.

Candace Kaleimamowahinekapu Galla's emails begin with Aloha and end with na'u—literally meaning 'mine' or equivalent to 'yours' in Hawaiian—or Mahalo—thank you.

"It's about finding spaces to use the language," says Galla, who studies indigenous language revitalization in the Department of Language and Literacy Education at UBC's Faculty of Education.

In the city of Hilo, where she worked at the University of Hawai'i's Ka Haka 'Ula O Ke'elikōlani College of Hawaiian Language before coming to UBC in 2011, she saw language being strengthened in a variety of ways. She would hear children using it in stores. Her first college-wide meeting was three hours long and conducted entirely in Hawaiian.

The College has a mandate to conduct all its business—academic and administrative—in Hawaiian. In 2010 it graduated its first Native Hawaiian PhD student who had submitted and defended her entire dissertation in Hawaiian—an impressive feat considering that the language almost went extinct 30 years ago.

In the 1980s, there were only about 2,000 people who still spoke Hawaiian fluently—the inevitable result of an 1896 ban

on using the language as a medium of education in schools. In 1978, Hawaiian was recognized as an official language; in 1986, the ban was repealed and a revival movement was born.

Today, there are about 10,000 fluent Hawaiian-language speakers throughout the islands. "Hawaiian is often used as a successful model of language revitalization," says Galla.

Galla grew up on a sugar plantation in Ka'ū, Hawai'i. Neither of her parents spoke Hawaiian. It wasn't until she attended Grade 7 at the Kamehameha Schools in Honolulu that she began to formally study her language and culture.

What surprised Galla at Kamehameha was that she knew more Hawaiian than she had realized. Although her mother Leiola Aquino Galla doesn't speak

Hawaiian, she is a kumu hula—a master hula teacher. Much to her displeasure, Galla had endured mandatory hula lessons, learning the dance movements, the songs, the history behind the songs and their interpretation.

"Hula was always part of my life but it wasn't until I began learning it at school that I began to appreciate it and my mom's teachings," says Galla, who will be using hula when she teaches a course on indigenous language revitalization through the performance arts in July.

"People may interpret that we do hula for entertainment purposes but it means much more. Hula and mele—songs and chants are a tribute to what has been carried forward from generations past. They have withstood the factions of colonization and the test of time."

After completing high school, Galla moved to Arizona to attend university and began studying Native American Linguistics. It wasn't until she got involved in the American Indian Language Development Institute (AILDI) that she discovered the field of language revitalization.

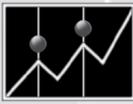
"I realized that Indigenous communities all over the world were experiencing something similar to what happened with Hawaiian," says Galla. "It is a way to connect what was going on in my home state to the rest of the world."

Since then Galla's research has focused on the role technology and computers play in helping revive languages—something she hopes to work on with First Nations language learners and speakers in B.C.

"Hawai'i is unique because there is only one indigenous language to the land," says Galla. "Many other states, territories and provinces, like B.C., are home to many indigenous languages, making it a challenge to implement equal resources for each language."

This winter, Galla taught a class of 21 students who were learning 13 different languages, many of them B.C. First Nations' languages. Although she doesn't teach the languages herself, she introduces students to the resources at their disposal.

"Many indigenous communities incorporate technology into their efforts to preserve and revitalize languages. In our class, students accessed archived and online resources and worked directly with community members." ●



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Call for Applications

Academic Director Learning Exchange

The University is seeking an Academic Director for the Learning Exchange (www.learningexchange.ubc.ca). The Learning Exchange, located in Vancouver's Downtown Eastside (DTES), exemplifies UBC's commitment to community engagement.

The Academic Director will serve as the academic champion for the Learning Exchange, taking a lead role in ensuring that the Learning Exchange is linked effectively with UBC's academic mission. In collaboration with the Learning Exchange Director, the Academic Director will build upon and add to current Learning Exchange community-university engagement activities and support the University's effort to achieve and strengthen its Place and Promise: The UBC Plan commitments. Key areas of responsibility include:

Initiating and facilitating collaborations with faculties, departments and individuals at UBC to develop synergies between initiatives in the DTES and the University

Maintaining and building relationships with community organizations in the DTES and other parts of Metro Vancouver to ensure the continued value of UBC's presence in the DTES

Advancing learning opportunities for marginalized residents through sustained community engagement; helping advance enriched educational experiences for UBC students in community driven projects

Enriching UBC's role as a convener of dialogue and champion for public discourse that includes the voices of marginalized citizens; encouraging the development of innovative public policy initiatives and community based action for change

Providing advice on matters related to academic culture, interests, and protocols

Consulting and advising on relevant stakeholder processes to inform Learning Exchange and University wide community-university engagement initiatives

Reporting to the Office of the Provost and Vice President Academic, and consulting with the Vice President, Communications and Community Partnership, the Academic Director will be seconded one day a week from their normal duties as a UBC tenured, full-time faculty member and will have research interests in an area(s) relevant to the work of the Learning Exchange: proven leadership ability and strong commitment to excellence in community-university engagement, student learning, research and service; and excellent interpersonal skills.

The appointment is a 20% secondment internal to the University and will be for a minimum of two years with the possibility of reappointment. Applicants should submit current CV and letter of interest to: provosts.office@ubc.ca or by fax at 604-822-3134. A position profile may be found at: www.vpacademic.ubc.ca

Questions may be directed to Ian Cavers, Chair of the Selection Committee at: cavers@science.ubc.ca; or Kathleen Leahy, Director of the Learning Exchange at: kathleen.leahy@ubc.ca.

UBC hires on the basis of merit and is committed to employment equity. All qualified faculty are encouraged to apply. We especially welcome applications from members of visible minority groups, women, Aboriginal persons, persons with disabilities, persons of minority sexual orientations and gender identities, and others with the skills and knowledge to engage productively with diverse communities and contribute to the further diversification of ideas.

Being different: a new camp assists kids with unique learning needs

Kyle Farquharson

From a young age, child educator Maki Narusawa began to appreciate that she was unlike many of her schoolmates. Always energetic, she struggled to pay attention in school, as her mind would frequently wander.

Nevertheless, her academic performance was strong, and few teachers questioned her nature. After all, no two people are the same and most adults concluded Narusawa was just an unusually vivacious kid.

Narusawa herself never understood why she wasn't like everyone else. She was isolated from other children and she suffered bullying throughout her school years.

"Sometimes when I'm explaining this to kids, I still tear up and get a bit emotional," she admits.

During her undergraduate studies at UBC, Narusawa's grades began to founder, as the heavier post-secondary reading load took its toll. In her third year, it all started to make sense when a name was given to her condition.

"I was diagnosed with [the inattentive sub-set of] ADHD, and giftedness," she recalls. "And I remember when I found out, I started crying. I kept thinking, 'If I'm gifted, why can't I write this paper, finish this reading, or this essay?'"

Following her diagnosis, among the most important lessons Narusawa learned were patience and self-acceptance.

"I have to be more forgiving to myself—remembering that if I forget something, or make a mistake, that it's gonna happen, and the point is to be always trying."

She has even designated a highly scientific name for the occasional mental lapses, a term that cracks up her young students: "brain farts."

After studying psychology, Narusawa went on to specialize in education for children with learning differences. She works as a special education assistant with the North Shore School District, and is passionate about affording all children the opportunity to succeed both socially and academically.

Many of the kids Narusawa works with face the same issues that she confronted: social stigmas, frustration, and problems coping with the rigours of a traditional classroom environment.

Narusawa is the founder of Camp Connect—a summer camp for children aged six to 11 with learning differences—which she will inaugurate this summer at UBC. Through Camp Connect, she hopes to help gifted and challenged youngsters associate with others who are dealing with similar circumstances, and provide helpful exercises and positive reinforcement.

"Do I think the social aspect of learning differences gets neglected?" asks Narusawa. "Yes, I would say so. There's really not much support [in schools] to work on things like social skills, and self-advocacy for children with learning differences. That's part of



istockphoto/shaperecharge Photograph

Camp Connect is a new UBC summer camp for children 6 to 11 with learning differences.

the reason why I wanted to develop Camp Connect."

The youngsters Narusawa hopes will enroll in her camp are children with ADD, ADHD, Asperger's syndrome, and other social and learning-related challenges. Camp Connect will provide them with an accepting environment and a series of activities to improve confidence, self-esteem and interpersonal skills. It will also help parents and caretakers understand the difficulties created by dyslexia, ADHD and other learning differences.

"Adults often think 'oh, they just need to focus more, they need to work harder and adhere to a schedule,' but for some reason, a lot of people have a hard time getting their mind around dyslexia and ADHD, and it leads to a lot of frustration," she said.

One of the aims of Camp Connect is to introduce parents to effective strategies to address their children's learning difficulties and ease the associated stresses.

Camp Connect will be available in 4- and 5-day sessions beginning on July 3, at the UBC Aquatic Centre. ●

UBC Summer Camps Sampler

UBC summer 2012 camps offer kids sports, adventure, visual arts, music, and specialty options. New highlights include: two weeks of soccer at Templeton Park and Douglas Park, as well as four weeks of musical theatre. Another unique camp is "Lights, Camera, Action!" which gives budding film enthusiasts a chance to explore theatre sound and lighting, digital photography and film production.

Check out www.ubccamps.ca for full course descriptions.

Vancouver Campus

Young Explorer Summer Camps is a weeklong environmental and recreational adventure camp for children aged 7-11 at Canada's oldest continually operating university botanical garden. www.botanicalgarden.ubc.ca/summer-camps

FarmWonders summer camps offer an innovative, educational program that allows children to explore issues of food security, and better understand where the food they eat comes from. farmwonders.ca

UBC Physics Outreach Summer Camps are for children in Grades 2-10 who enjoy building things and learning about science. Build planes, go SCUBA diving, learn the physics of sound, or build a Martian habitat. outreach.phas.ubc.ca/SummerCamps/

GEERING UP! offers week-long science, technology and engineering camps for children in Grades 2 - 10. www.geeringup.apsc.ubc.ca

TechTrek Summer Camps—Campers take computers to a whole new level, learning how to create cell phone apps, design games, program robots and more. www.techtrek.ca

Gymnastics Camp—Children aged 4-12 will enjoy a week filled with gymnastics activities and games, arts and crafts, and more. www.hkin.educ.ubc.ca/gymnastics/UBC_Gymnastics/gymnastics_camps.htm

CampOUT! is an empowering outdoor summer camp for queer, trans, two-spirit, questioning, and allied youth aged 14-21 from across British Columbia and the Yukon. campout.ubc.ca

eHealth Camps give youth in grades 10-12 the opportunity to program health apps for smartphones, engage in health-training computer simulations, and go behind the scenes at hospitals and the TELUS Innovation Centre. www.ehealth.med.ubc.ca

The Institute for Aboriginal Health's Dentistry Program is open to high school students who identify as First Nations, Métis or Inuit, and provides teens with the opportunity to learn and practice dentistry techniques. The camp is designed to encourage First Nations, Métis and Inuit enrolment in the dental profession, and takes place at the Nobel Biocare Oral Health Centre. <http://www.iah.ubc.ca/education/programs/summer-science-program-2012>

Okanagan Campus

U Camp offers themed week-long activity camps at UBC's Okanagan campus. Camps include: Mini U, Kreative Kids, Multi-Sports, UBC Survivor, Geering Up and Outdoor Adventure. <http://www.ubc.ca/okanagan/campusrec/camps.html>

Heat Athletics' sports camps at the Okanagan campus give campers the opportunity to enhance their athletic skills in a fun and exciting way. Activities include Ultimate Frisbee, Basketball, Soccer, Volleyball and athletic conditioning. www.ubc.ca/okanagan/athletics/events/camps.html

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Keen on worker safety

Global Academics Internship at UBC builds confidence

Gudrun Jonsdottir

If you accidentally pour acid on your shoes in the lab or get banged up at a UBC construction site, chances are Gabriela de la Paz is going to know about it. Her current internship at UBC's Risk Management Services has given her a glimpse into what she hopes will be her future.

"I want to be a safety consultant, an expert who protects the workforce," says de la Paz, one of 26 current students enrolled in the Global Academics Internship program (GAIP) offered by UBC Continuing Studies.

One of many Global Academics programs offered by UBC Continuing Studies, the GAIP program is designed to help international students get their bearings in Canada and to take part in academic life before entering graduate school or the workforce. The students develop cultural fluency, valuable communication skills and practical work experience.

The GAIP program attracts students from disciplines as diverse as theatre, life sciences and media studies. Partner organizations are equally varied and include Metro Vancouver, Telus World of Science, local seniors' centres and UBC.

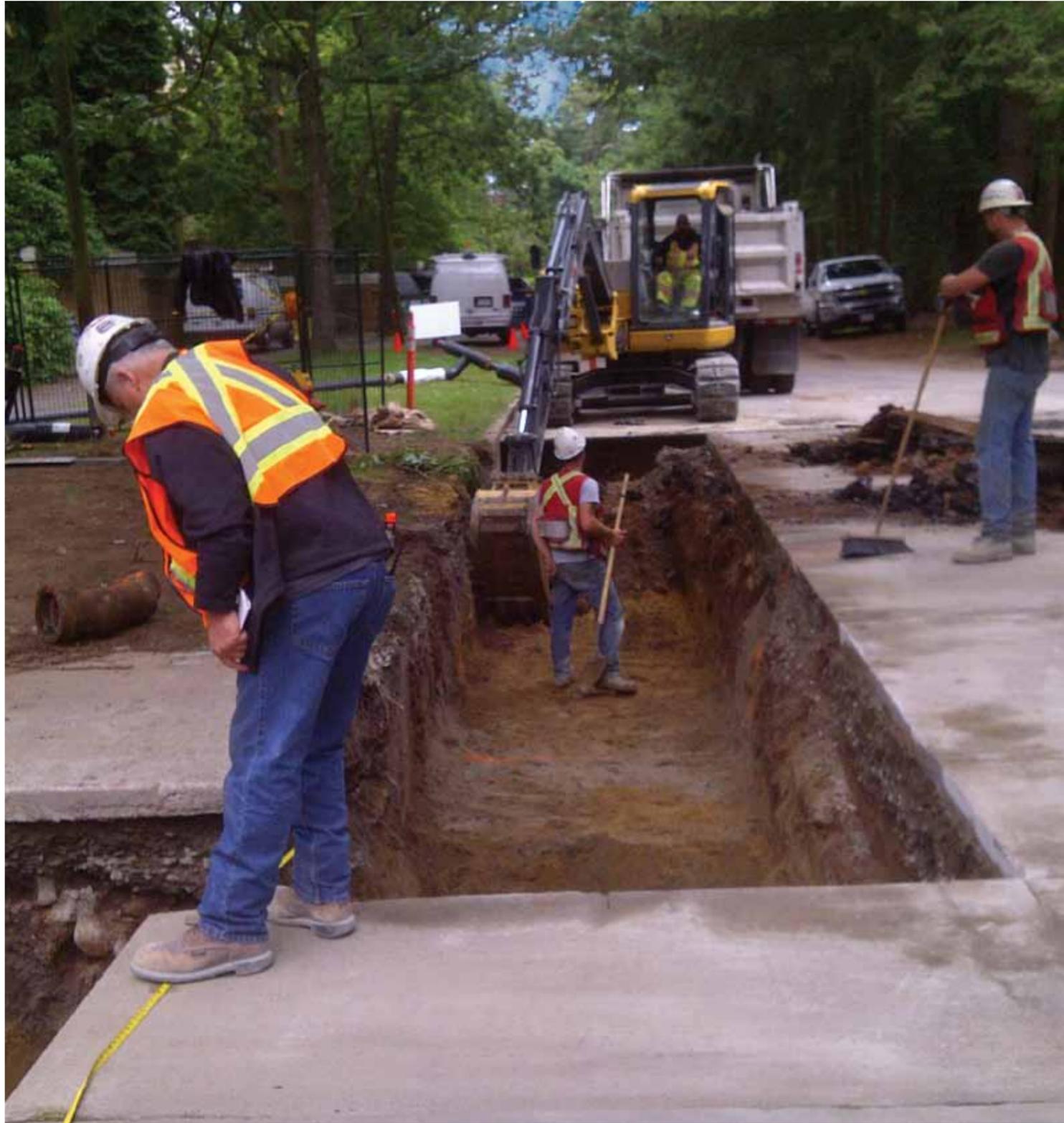
Being immersed in UBC's diversity has been a highlight for her, says de la Paz.

"I receive reports about accidents that happen at UBC. I read them, categorize them and sometimes I do a little investigating into why they happened," says de la Paz. The ultimate goal is to develop a centralized database for better accident investigation, ultimately improving the safety of workers and students of UBC.

De la Paz hails from Monterrey, Mexico where she graduated last December with a bachelor's degree in industrial engineering from the Monterrey Institute of Technology university system (Tec de Monterrey). She explains that she caught the engineering bug from her father, also an industrial engineer.

"I like industrial engineering because it gives you a little bit of every area of engineering," de la Paz says. All her degree was missing, she adds, was "a little business know-how."

To remedy that, de la Paz came to UBC as an exchange student, earning a certificate in supply chain management and logistics at the Sauder School of Business. This fall, de la Paz starts a UBC master's program in occupational safety and environmental hygiene. The GAIP program has increased her confidence for this new chapter, notes de la Paz. "I wanted to do something so



Samuel Stime Photograph

Gabriela de la Paz worked with UBC's Risk management Services through the Global Academics Internship Program on worker safety matters.

that I could gain practical experience in occupational safety and so that I could improve my English."

The internships are four to eight weeks long, and de la Paz is nearing the end of hers. "It has been an amazing experience. Everyone has been so nice and I think they have really prepared me for the workplace." She says that her co-workers' support and strong sense of teamwork helped her excel at her internship. The team left no man or woman behind. "Key stakeholders were always involved in my progress and we regularly met for me to get feedback and suggestions," she adds.

After being in an English-speaking

environment for a while, de la Paz has gotten accustomed to different styles of writing for the workplace. "I learned technical vocabulary in safety and health which will be useful for the rest of my career," she says.

The first half of de la Paz's internship consisted of coursework, with most of her classmates being Korean. "It was a challenge to adapt in such a short period of time, being the only Mexican in the group," says de la Paz. But as it turns out, being immersed in UBC's diversity has been a highlight for her. She says she has gained new friends, being in an environment so different from her home university.

"[UBC's diversity] can give me a better picture of how business is done, which are the best practices, not only in my country or Canada but also in other countries."

The 23-year-old is even more enthusiastic about her future in accident prevention because she took full advantage of her experiences with the GAIP program.

"I would absolutely recommend it. It can give you a broader perspective of how to apply what you learn at school. Especially for jumping into a master's, it can give you a great set of tools and if you can make business work in Vancouver, you can do it anywhere." ●