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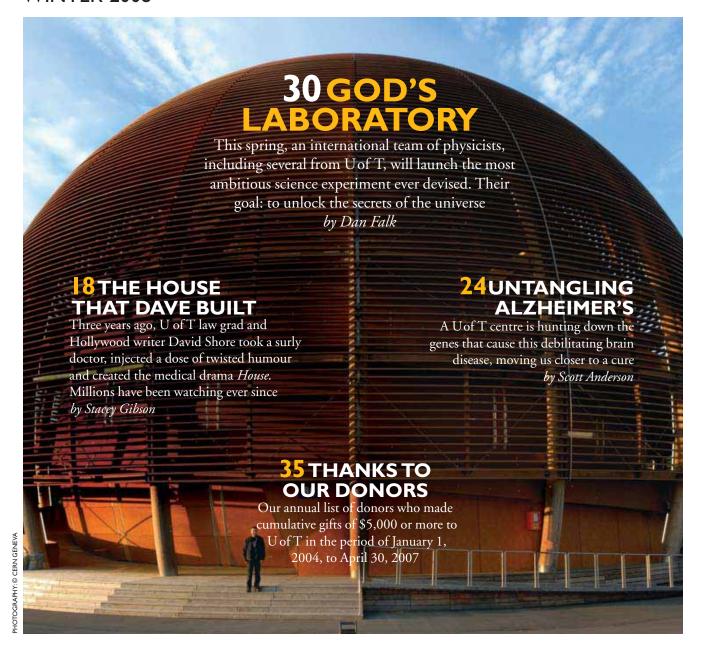
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Oct 3 - 15 Building an Alumni School in Kenya \$4775 + air



**WINTER 2008** 



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Cover photograph of

David Shore by Howard Rosenberg



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## Life, the Universe and TV

Three views on scientific investigation

CONTRARY TO POPULAR BELIEF, MOST SUCCESSFUL SCIENTISTS DON'T EXPERIENCE a "eureka" moment. The vast majority work away in their labs quietly, making incremental discoveries that, over many years, add significantly to our knowledge and understanding of a subject.

That's how Dr. Peter St. George-Hyslop, the director of U of T's Centre for Research in Neurodegenerative Diseases (CRND), characterizes his work in Alzheimer's disease over the past 15 years. "You get an interesting result, you follow it up and you do a bit more work," he says. It's only when you start to add up all those "interesting results" from years of painstaking lab work and detailed analysis that you can see just how far you've come. This fall, I spoke with St. George-Hyslop and other CRND researchers about their groundbreaking study of Alzheimer's, a debilitating brain illness that destroys a patient's memory and all higher thought processes. Although a cure is likely still many years away, CRND's discoveries have yielded some intriguing possibilities for new ways to treat the disease (see "Untangling Alzheimer's," p. 24).

Medical research tends to grab the headlines, but these are exciting times in physics, too. In May, a team of international physicists will switch on the world's largest particle accelerator, built deep underground near Geneva, Switzerland. Scientists hope that experiments planned for the \$8-billion facility will yield answers to some of the most puzzling questions about the nature of the universe. Last summer, writer Dan Falk visited the Large Hadron Collider (LHC) while it was still under construction, and spoke with some of the University of Toronto scientists involved with the project (see "God's Laboratory," p. 30). He found their excitement contagious. Many of them, such as physics professor Richard Teuscher, consider their LHC work a high point of their careers, and hope the experimental results will resolve longstanding debates in the physics community over the fundamental forces and particles in the universe.

U of T law grad David Shore is neither a doctor nor a scientist, but he has created a compelling television character who is – Dr. Gregory House, a maverick medical genius who heads a team of young diagnosticians at an American hospital. Shore conceived of the show as a hospital whodunit, with House, his medical detective, taking inspiration from Sherlock Holmes. As managing editor Stacey Gibson writes in her profile of Shore ("The House That Dave Built," p. 18), the lawyer-turned-writer shares more than a few characteristics with his fictional creation. Both are highly irreverent, rebellious by nature, very successful and like to push the envelope – although there's one important difference, says Shore: "House is smarter than I am."

We'd like you to push your own creative envelope by entering The Great University of Toronto Photo Contest (see p. 60). Take a colour shot of something (or someone) related to U of T, then go to www.magazine.utoronto.ca, read the contest rules and send in your entry. We have some great prizes to give away, and winners will be published in the Summer 2008 issue. The deadline for entries is March 1, 2008, so get snapping!

**SCOTT ANDERSON** 



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## A Gallery Perspective

The Doris McCarthy Gallery at the University of Toronto Scarborough is a cornerstone venue promoting visual arts from contemporary and historical perspectives. Recently, the gallery hosted Return, Afghanistan - Photographs by Zalmai, circulated by the Aperture Foundation.

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# President's Message

#### **GTA Overload?**

Our undergraduate recruitment challenge

OVER THE NEXT 15 YEARS, THE NUMBER OF STUDENTS attending university in Ontario is expected to grow by 120,000 – or more than 30 per cent. Growth will be especially fast in the Toronto region, and many students will want to stay close to home. That's a splendid recruitment opportunity for U of T.

It's also a trap. Our long-standing pattern of skimming the best undergraduates from the Toronto region has paid handsome dividends with a dynamic and talented student body. But in some respects, it has restricted our reach and our diversity. Last year, for instance, almost 75 per cent of the students

entering an undergraduate program at Uof T came from the Greater Toronto Area. Repeating that pattern means we will continue to draw a very high proportion of commuter students who, on average, are understandably less engaged with on-campus life.

At the graduate level, the story is different. The GTA yields 60 per cent of our graduate students, but 25 per cent come from outside Ontario and 15 per cent from abroad. Our professional faculties are even more geographically diverse. Fewer than half of all architecture students and about half of all law students come from the Toronto area.

There's a lesson there. Our global reputation is driven primarily by our research intensity and our professional and graduate programs. And, judged by research productivity, citations and achievements — as well as discipline-specific measures of our reputation among academic peers worldwide — we remain the top university in Canada. One example: overall rankings of universities are by and large a mug's game, but the Academic Ranking of World Universities at least has stayed with one set of methods and rejected the usual tossed salad of "adjusted" scores. By that measure, we are consistently number one in Canada, with the University of British Columbia in second and McGill a distant third.

As I've noted before, the key challenge for U of T is to share that excellence with our undergraduate students, and we still have work to do. With rapid enrolment growth in recent years, student-faculty ratios rose, more students with B+ high school averages were admitted to first year and undergraduate students have given us some mediocre

grades on measures of satisfaction and engagement.

Better services and more resources would help resolve some of these issues. But we should also consider how enrolment affects the stu-

**C**Our global

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and graduate

programs

dent experience. After all, who is more likely to be satisfied and engaged? A commuting student who has little time to spend at U of T outside of classes, or a student living on or near one of our three campuses?

These and related questions are now being raised by a high-level task force on enrolment, launched under the auspices of our "Towards 2030" strategy-setting exercise. Among the related questions: How much more growth can Uof T accommodate on each of its three campuses? And, perhaps the toughest of all: Are entering grades the *sine qua non* of student excellence? If not, what other attributes matter in undergraduate recruitment?

Once we've clarified our strategy, the harder work of implementation begins. Better communication with high school guidance counsellors, advertising, visits to

selected schools, involving local alumni in recruitment – these are part of the picture. Growth in our scholarship programs is also a priority. Currently, the university bestows some 1,400 admission scholarships – valued at a few hundred to several thousand dollars – to the top incoming students each year. Yet fewer than 400 students receive scholarships valued at the level of tuition in first year.

Traditionally, alumni have been tremendous supporters of scholarships and awards. They have also been telling me, in one city after another, that if we are prepared to launch a more proactive recruitment strategy, they will be ready to help us draw more of the best and brightest high school students to U of T from across Canada and around the world. For that, and for your continued support, my deepest thanks. We'll be calling on you as our long-term planning exercise draws to a close in the months ahead.

o is more likely to be satisfied and

Sincerely,
DAVID NAYLOR

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- Eliminate CO emissions at the source. Make maintenance of your fuel burning appliances, equipment and venting systems an absolute priority.
- Know the symptoms of poisoning. They are similar
  to the flu-nausea, headache, burning eyes, confusion
  and drowsiness-except there is no fever. If they
  occur get everyone, including pets, outside to fresh
  air and call 911 or the local fire department.
- As in the case of smoke detectors, batteries in your
   CO alarm are to be changed at least twice a year.

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## A Soldier's Story

I.K. Macalister's tragic tale is a reminder of the ultimate sacrifice

#### A TOWER'S MEANING

I always enjoy reading *U of T Magazine*, but the Autumn 2007 issue was particularly good. The articles "Witness to War," by Stacey Gibson, and "Behind Enemy Lines," by Alec Scott, were both extremely interesting. When I attended the University of Toronto, I often walked past Soldiers' Tower but didn't think too much about it. After reading the story about J.K. Macalister and Frank Pickersgill and their capture by the Nazis in the Second World War, I would like to learn more about the individuals who gave their lives for our country.

> Linda Klassen PharmD 1995 Saskatoon

#### THE STORY BEHIND THE SCHOLARSHIP

Thank you for the story on John Kenneth Macalister ("Behind Enemy Lines," Autumn 2007). I won the J.K. Macalister scholarship at Guelph Collegiate Vocational Institute. Like Macalister, I also went on to U of T. However, unlike him, I subsequently returned to Guelph and lived near the park named in his honour. Although I knew the bare bones of his story I was interested to learn more.

> Angela Hofstra BScPhm 1986, PharmD 1993 Guelph, Ontario

#### **GOOD NEWS FOR A CHANGE**

I wish to commend you for your wonderful work, but I also wish to draw your attention to certain aspects of the Autumn 2007 issue that you may not be aware of.

On the cover, Dr. Samantha Nutt is holding a picture of an apparently mal-



nourished African child. Another story concerning black people, "The Schools We Want," is about black youths having difficulties in school.

I appreciate your efforts to make the concerns of black people news, but, on the other hand, it's rather distressing that the news about Africans and black people is so often about suffering, violence and pain.

May I suggest that the next time a black person makes your cover it be good news?

> Emmanuel Mbam ThM 2006 Toronto

#### **DOING THE RIGHT THING**

It never fails to astonish me that each year more and more people give more and more money to charities and universities. From the cynic's point of view, people like Sheldon Inwentash and Lynn Factor and the Goldring family ("Great Gifts," Autumn 2007) give because they get a great tax receipt or because they can't use all that wearisome cash anyway or because they want their names on a building or two. But does it matter whether the cynics are right? Not really. The point is they have chosen to do some public good with their wealth instead of rolling around in it like some self-indulgent Scrooge McDucks. Good for them.

> Geoff Rytell BEd 1975 Toronto

#### **SLURRING WORDS**

Like H. Farrugia, I am upset that U of T Magazine used the term "white-bread" to refer to whites ("Letters," Autumn 2007). What a sad world we live in if we have to cross the line of decency to emphasize a point. By the way, I can find many racial slurs in various dictionaries, but that doesn't mean that I have to use them. There is something that each of us should use - and that is good taste.

> M. Novar Mississauga

Letters may be edited to fit available space and should be addressed to University of Toronto Magazine, 21 King's College Circle, Toronto, M5S 3|3.

Readers may also send correspondence by e-mail to uoft.magazine@utoronto.ca or fax to (416) 978-3958.

# leadingledge

# When Flattery Rears Its Head

Children as young as four understand that well-placed praise can yield social benefits

arents cajole their children to always tell the truth, overlooking the fact that flattery – along with showing modesty, agreeing with another's views and telling white lies – is an important social skill that psychologists dub "ingratiation behaviour."

mah-vellous!

Kang Lee, professor and director of the Institute of Child Study at OISE, has been conducting some of the first studies of the emergence of flattery in children. It is a natural area of interest for Lee, who has been researching the development of lie-telling in children for the past decade. In a study published in Developmental Science, Lee and his colleague Genyue Fu

of Zhejiang Normal University in

China reveal much about when and how children first use flattery. They asked a group of preschool children ages 3 to 6 to rate drawings by children and adults they knew, as well as strangers. The preschoolers judged the artwork both when the artist was present, and

adults they knew, as well as strangers. The preschoolers judged the artwork both when the artist was present, and when he or she was absent. The three-year-olds were completely honest, and remained consistent in their ratings; it

didn't matter who drew it, or whether the person was in the room. Five- and six-year-olds gave more flattering ratings when the artist was in front of them. They flattered both strangers and those they knew (although familiar people got

year-olds, half the group displayed flattery while the other half did not. This supports the idea that age four is a key transitional period in children's social understanding of the world.

Lee suggests adults flatter for two reasons. It can be to show grat-

a higher dose of praise). Among the four-

action in the past. As well, when they're meeting someone for the first time – someone who may turn out to be important for their advancement

itude for some positive

down the road – flattery is also used as an

investment for future favourable treatment from the person. "We don't know which the child is doing," says Lee. However, the fact that the older children flattered strangers as well as familiar people suggests "they are thinking ahead, they are making these little social investments for future benefits."

- Conrad McCallum

### Nutrition in a Bottle

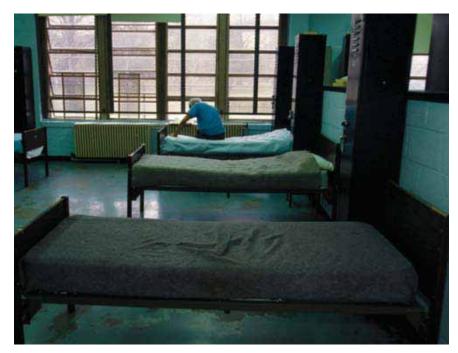
rofessor Levente Diosady is seeking to alleviate one of the developing world's most serious problems — one sip at a time. Some two billion people are affected by micronutrient deficiencies, which can lead to blindness, brain damage, severe infection and death. Diosady, who directs the Food Engineering Group in the department of chemical engineering and applied chemistry, is creating a low-cost and flavourful drink that comprises clean water; protein, vitamins and micronutrients in fruit juice and

soft drink formulas. "With this, you can prevent deficiency diseases, add some food protein value – which is expensive because you usually get it in meat – and provide safe drinking water at the same time," he says.

Diosady hopes to have test products by late 2008 or early 2009, and run a pilot project perhaps one year after that – or sooner, if he can find a corporate partner. He expects the drink (which has been given the working name "Live-Ade") to become a self-sustaining, commercial product,

distributed through a major bottler or protein manufacturer. He foresees marketing the drink in areas such as India and China, or giving it away in a relief capacity in places such as Darfur refugee camps with the help of a sponsor: "It's entirely possible that, maybe not Live-Ade but something of this sort will become the Coke of the developing world," says Diosady. "The wildest dream of everybody in this field is to eliminate diseases caused by poor quality food."

— Tim Johnson



# Seeking Justice for All

Pilot project helps people avoid jail-shelter cycle

U of T study released last November addresses the disquieting problem of homeless men and women trapped in a revolving door of prisons and shelters — and that research has now led to a pilot program for those who have lived on the streets and been incarcerated.

The report, released by U of T's Centre for Urban and Community Studies (CUCS) in partnership with the John Howard Society (JHS) of Toronto, found that over a five-year period, the group caught in this jail-shelter-jail cycle had grown larger. "With failures across various programming areas – health, housing, criminal justice, et cetera – we're seeing a number of people who are completely lost amongst these institutions and just bouncing around," says Sylvia Novac, lead researcher and a CUCS research associate.

The study also indicates that homeless people are more likely to be victims than perpetrators of crime, and highlights the role of the troubled relationship between the homeless and police. "Some homeless people are reluctant to

report how they've been victimized on the street, precisely because there's so much suspicion of them being criminals," says Joe Hermer, assistant professor of sociology and criminology at U of T and one of the report's authors.

The initial findings helped give rise to a pilot project called the Post Incarceration Housing Support Program. It includes transitional accommodation that has successfully housed 130 people who have been homeless and incarcerated. Workers help clients find and maintain affordable housing and offer follow-up support. Both IHS and Toronto's Streets to Home Initiative are involved in the project. Amber Kellen, who oversees advocacy and community programs for the JHS of Toronto and participated in the research, is confident that the program will be extended. "So far, the report has proven to be much more than a document that sits on a shelf gathering dust. It's taken on a life of its own,' she says. "I see this as the beginning of something more."

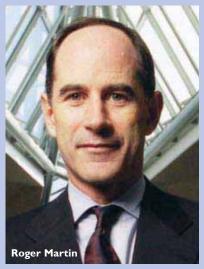
– Tim Johnson

## When Opposing Thoughts Attract

hen Alan Lafley took over as CEO of Procter & Gamble in 2000, the company was on a downswing. Profits were tanking and many of its biggest brands were losing market share to lower-priced competition. Some of the company's senior executives urged Lafley to spend more on research and development. They reasoned that P&G needed to introduce exciting new products to spur growth. Others believed just as strongly that P&G had to rein in costs and lower its prices to compete with store brands and private labels.

Lafley considered the options, and then chose neither. Or, rather, he chose both. Over the next several years, he eliminated layers of management and instilled a relentless focus on cutting costs. At the same time, he adopted a new approach to innovation by teaming up with smaller companies to develop new products. Before long, P&G was back on track.

Roger Martin, dean of the Joseph L. Rotman School of Management, tells Lafley's story in his new book, *The Opposable Mind: How Successful* 



Leaders Win Through Integrative Thinking (Harvard Business School Press). It illustrates Martin's concept of "integrative thinking" – the ability to consider two opposing ideas, synthesize them and come up with an entirely new, and better, idea. Martin believes this skill is what sets apart great leaders from merely average ones, and for

Continued on page 12



# Something in the Air

An international research team has found traces of phosgene in the atmosphere

here's been a lot of discussion about manmade gases in the atmosphere wreaking havoc on the Earth, but this one is a killer. Literally.

Allied and Central powers used phosgene as a chemical warfare agent in the First World War. But a University of Toronto project has found the deadly gas in our

atmosphere as a result of human industry.

Phosgene is produced when chlorocarbons, a chemical relative of CFCs, break down in the upper atmosphere. On the ground, chlorocarbons are non-reactive strings of carbon and chlorine. They are used in the production of pharmaceuticals and insecticides and are even found in dry-cleaning fluid. But, when those chlorocarbons reach the stratosphere, ultraviolet light breaks them down into highly reactive smaller molecules. Not only do these molecules turn into nasty chemical gases, but they also contribute to the destruction of the ozone layer.

Dr. Kaley Walker, an assistant professor of physics at U of T, was part of an international team of researchers (from the University of Waterloo, the University of York in the UK, NASA's Jet Propulsion Laboratory and the New Mexico Institute of Mining and Technology) that used

the Canadian Atmospheric Chemistry Experiment satellite to measure worldwide concentrations of the gas for the first time. Their research, published recently in *Geophysical Research Letters*, shows that concentrations of phosgene are highest around the equator where the greatest amount of UV radiation hits.

The team also found that phosgene concentrations have steadily declined since the Montreal Protocol, which banned many varieties of CFCs, chlorocarbons and other ozone destroyers, was signed 20 years ago. (The researchers compared their worldwide measurements to isolated assessments from decades earlier, as well as the last few years.) International delegates met in Montreal on the 20th birthday of the Montreal Protocol this past September, and agreed to more stringent target dates for banning the final ozone-destroying compounds.

Although phosgene is harmful, the levels the researchers found in the atmosphere are at least 10,000 times less than what is considered an acceptable exposure for humans. The work was funded by the Canadian Space Agency and the Natural Sciences and Engineering Research Council of Canada.

- Graeme Stemp-Morlock

#### Continued from page II

the past six years the Rotman School has been teaching it to MBA students. Most management books, and many MBA programs, examine what successful managers do. A more useful approach, says Martin, is to study how they think. So he interviewed 50 respected business leaders – sometimes for as long as eight hours – to tease out how they make important decisions.

When attempting to resolve a dilemma, "integrative" thinkers differ from regular thinkers on four key points, writes Martin. They take a broader view of what's relevant to their decision, more fully

explore how these elements relate to each other, consider the problem in all of its complexity rather than breaking it into parts, and don't accept unpleasant trade-offs in order to find a solution. They always search for a creative outcome.

Martin provides plenty of vivid, real-life examples to illustrate this process, though one wonders if the decisions the managers faced were quite as simple as the either-or choices he describes. (Lafley must either cut costs or boost R and D spending. Hotelier Isadore Sharpe can build either small motels or large business hotels.)

Martin devotes the second half of the book to teaching readers how to develop their own integrative thinking skills. He introduces a lot of new concepts – the section reads a little like a series of compressed MBA classes – but thankfully avoids jargon and provides exercises that allow readers to approach problems as Lafley might. "Reflecting on how you think is a powerful way to change how you think," writes Martin. While this is true, most of us don't know where to start. *The Opposable Mind* provides a map.

- Scott Anderson

# ew& otable



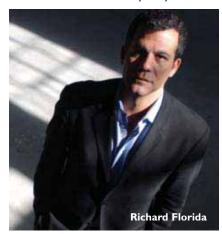
# Urban Legend

Celebrated American academic Richard Florida heads up the new Martin Prosperity Institute at U of T

here was an eerie synchronicity about Richard Florida's entry on the Toronto scene just as Jane Jacobs exited it for the last time. Jacobs had left her beloved New York for Toronto in the 1960s and Florida gave up an endowed chair at George Mason University in Washington D.C. to run the new \$120-million Martin Prosperity Institute at the Rotman School. Both emigrations generated much comment. And there are intellectual ties between the two urban theorists: Jacobs is one of Florida's idols, and his work aims to plow the fields cleared by her seminal 1961 tract, The Death and Life of Great American Cities.

Florida's recent best-selling books, The Rise of the Creative Class (2002) and The Flight of the Creative Class (2005), argue that cities live and die based on their ability to attract and retain creative types. The two volumes have become gospel for progressive city planners. "It's not just about building high-tech office corridors," he says. "It's about creating the sort of cities that creative people want to live in." So pervasive are his ideas that comedian Stephen Colbert did a segment on Florida's use of a gay index, to estimate how attractive a city is to the group he calls the creative class. "I

used this rough measurement of the concentration of lesbians and gays in a region to measure how comfortable a city could make a diverse set of people, creative people, and that drew a lot of comment and controversy," says Florida.



The trained economist's interest in what makes cities thrive or wither has roots in his own life. The son of an Italian-American factory worker watched disenfranchised (mainly black) rioters run amok in his hometown of Newark, New Jersey, in the 1960s, precipitating the flight of its (mainly white) middle class to the suburbs. "The key work that this institute will have to do, and the reason we've called it the Prosperity Institute, is to marry a discussion of growth and competitiveness with a dis-

cussion of social inclusion. The question is, 'Can you have growth that is not so divisive?'"

Florida, 50, is among the many commentators to see two nations emerging in his native America. With a typically speedy burst of words, he paints the split in the States in more than red and blue: "The people voting George Bush into office, the people Karl Rove is targeting, are the people on the wrong side of the class divide. They're scared, anxious that they're being left out. They don't see many options for their kids; they're not technologists; they're not artists. They live in more rural areas, and what they're hearing is, 'gay folks are the cause of your problems, immigrants are taking your jobs."

Which brings him to another aim for the fledgling institute (named after Dean Roger Martin's parents): to focus on how smaller centres can remain competitive in a swiftly urbanizing world. "This is not just about Toronto. We want to have day sessions where people from across the province can come and get a tool kit and go back to their towns and try out some of these ideas."

This ebullient man, an avid bicyclist and committed social activist, doesn't think universities should be ivory towers, places for pristine thoughts or retreats from the too, too frantic world. He enjoys articulating theories, but, like Jacobs, likes to watch them in action. "I love that we're in the MaRS building, under the cupola, that we're part of the downtown, not on a separate campus. We want to make it a place where not only scholars feel comfortable, but where policy-makers, creative folk also feel at home, where you could see both a Leslie Feist and a Dalton McGuinty." - Alec Scott

#### Continued from page 13

"It's truly magnificent, it's spectacular...
there is a sense of magnificent isolation —
even though you can hear people talking to
you on the radio, you feel kind of alone in
the universe."

Although he would happily return to space, Williams' priorities have shifted to the next generation of Canadian children who share his passion for exploration. When a

seven-year-old Dave Williams first turned his eyes to the stars, Canada didn't have an astronaut program and he was told his dream was impossible. "What I'd like to share with students is that when you get to those moments, don't give up on your passion and your dream," he says. "Anything that's truly meaningful is not easy. It's the paradox of life." – Nicolle Wahl

# Thinking Big

Chief advancement officer David Palmer lays the groundwork for the next generation of fundraising at U of T

ou don't become U of T's most senior fundraiser by thinking small, and David Palmer, who started as chief advancement officer in September, has some big ideas about U of T's role in advancing Canada's economic and social agenda. Palmer is the former president of the Royal Ontario Museum's board of governors and the architect of the \$300-million Renaissance ROM Campaign. He spoke with U of T Magazine editor Scott Anderson in October about his initial impressions of U of T, its strengths and his priorities in the coming year.

#### You've been on campus two months now. What are your early impressions of U of T?

What has struck me most is the universal commitment to leadership I've seen among faculty, staff, students and volunteers. Many are undisputed leaders in their field or, in the case of students, leaders-in-making, whose work is contributing in significant ways to the betterment of society. But my impression is of more than just hard work and dedication. People derive a fundamental sense of accomplishment and satisfaction from their association with U of T. These are individuals who are making a difference. It's why our alumni volunteers and donors make such a passionate commitment of time and energy and why they thrive on their involvement with U of T. That's what makes the university such an exciting place, and why I found it an irresistible destination.

#### What do you see as U of T's public role?

As a national institution of international

importance, U of T is vital to Canada's future economic success and competitiveness. The university has a remarkable depth of talent, research, teaching and outreach that makes it a leader in areas that go well beyond the aca-

demic community. U of T is an engine for growth – a source of both leadership and innovation.

#### What are our strengths? What challenges do we face?

The university is still vastly underfunded, on a per-student basis, compared to its peers in the United States. Despite this, U of T is arguably, dollar for dollar, the most productive research university in the world - second only to Harvard in research impact as measured by citations. For students, such research means access to discovery and an educational experience of the utmost currency and relevance. For alumni, it means access to some of the most exciting thinkers in the world. For society, it gives Canada a competitive edge in research and innovation. Building on these strengths will require an enormous commitment of time, energy and resources.

#### Your title is vice-president and chief advancement officer. How do you define "advancement"?

For me, advancement is about the pursuit of excellence. It's about the enhanced opportunities for students and faculty that come from investment in growth and innovation.



#### What will your priorities be in the coming year?

The university's responsibility to its students doesn't end with graduation. We have to look for ways to add value to the alumni experience over a lifetime. A new online alumni community to be launched next year marks a great addition to that lifelong partnership. It will offer grads new ways to connect with other alumni and easy access to the many services the university provides.

I also plan to meet with U of T's alumni in Canada and around the world to encourage the participation of a more diverse range of grads. I know from the ROM how successful an institution can be when it throws its doors open to a broad group of people. And I know that initiatives like that exist in different places around the university. It's an approach from which I think all of U of T will benefit.

Finally, we will be laying the groundwork for the next generation of fundraising at U of T. The university's most § recent campaign ended in 2003 and 8 raised \$1 billion. Since then, we've begun building new momentum with some very important major gifts. The key is 9 building a base of support, involvement and interest commensurate with the aspirations of the university.



#### **About Face**

A popular social networking website is changing how students interact

alk down a busy thoroughfare on any university campus today, and, sooner or later, you're bound to overhear that magic word: Facebook. The social-networking website Facebook.com started in 2004 at Harvard, and is now among the 10 biggest Internet sites.

Facebook has become the virtual town square for the U of T community: more than 61,000 students, faculty and alumni are part of the university's Facebook network. It's sprawling, chaotic and often a terrific time-waster, but increasingly essential to university life. One popular feature is events listings, where student groups post news about meetings or parties. One recent day in October, the U of T network home page touted a toga party, an open-mic poetry reading and a game of hide-and-seek in the University College quad. Students had also posted messages looking for lost textbooks, requesting tutors and advertising apartment rentals. New features pop up daily, from online Scrabble games to music jukeboxes to virtual gifts.

Alumni are getting into the action as well, forming Facebook groups for their own faculty or class. The umbrella University of Toronto alumni group posts information about events and provides networking opportunities for its small but growing list of members.

This additional layer of interaction online is altering the social landscape in ways large and small. For students already living cheek by jowl in residence, it may seem odd to sit at your computer typing a Facebook message to someone down the hall, but it's common. For commuter students who are not always on campus, it's a way to stay in the loop socially and



Recently, Facebook's U of T network home page touted a toga party, an open-mic poetry reading and a game of hide-and-seek in the University College quad

academically. But the site's complex etiquette is still emerging. For instance, looking at someone's profile if you aren't officially confirmed as friends is known as "creeping," a practice that is discouraged but widespread. And the way students present themselves – some are intensely private, offering few personal details, while others let it all hang out with photos, employment histories and romantic escapades – reflects the huge cross-section that mingle at the site.

However, Facebook shows signs of becoming a victim of its own success. Users such as Rachel dela Fuente, a fourth-year sociology and anthropology major and a Facebook user since her first year at Innis College, feel burned out by the flood of messages, articles, videos, photo albums and party invites that pile up on the site every day. "Sometimes I think it's ridiculous," she says. "It's a good way to get a summary of what's going on with your friends, but most of the people that I do talk to [on the site] are the people that I talk to regularly anyway."

Facebook's many contradictions have made it a fascinating, maddening and downright addictive tool for U of T users. But, as dela Fuente says: "I'll lose touch if I don't use it." – *Graham F. Scott* 

U of T will launch its own online community for alumni this summer. Watch for a story and information about how to sign up in the Spring 2008 issue.

#### U of T Facebook Factoids

Want to know more about U of T Facebook members? Here are a few particulars to get you started.

#### Plays well with others?

43 per cent of network members list no relationship status at all. 25 per cent define themselves as single, 22 per cent are in a relationship, 5 per cent are married, 2 per cent are engaged and 2 per cent say, well, "it's complicated."

#### Political - or, apolitical - stance

64 per cent of network members don't list their political leanings. 13 per cent describe themselves as "liberal," 3 per cent as "conservative" and 2 per cent as "apathetic."

#### Londoners rule

Until July 2007, when London, England, surpassed it, Toronto was the largest Facebook network in the world, with more than half-a-million members.

#### There will be a slight delay in handing in my assignment...

Number of "University of Toronto Procrastination Association" members: 3,894 **Bookish bent** 

The top five books (or series) are: I. Harry Potter; 2. 1984; 3. The Catcher in the Rye; 4. Pride and Prejudice; 5. Life of Pi

#### Cheesy sitcom fave

Rank, among most popular TV shows on the U of T network, of Friends, an NBC sitcom that first aired in 1994: 6

#### We are the champions

Number of members in the group "I go to U of T, of course I'm better than you!":

#### We are the ninjas

Number of members in the group "University of Toronto sucks so I'm becoming a ninja": 75

– G.F.S.

#### **Trampolinist Beijing Bound**

osannagh MacLennan, a second-year physical education and health student, has bounded her way to a spot in the Beijing 2008 Summer Olympics. The trampolinist secured a 10th-place finish at the World Trampoline and Tumbling Champi-

onships in Quebec City in November, earning herself a place at the Games. She and teammate Karen Cockburn. who also qualified, won their fifth gold medal last April at the Trampoline and Tumbling World Cup.



Rosannagh MacLennan

#### Constitutional Centre at Law School

\$7.5-million gift from David Asper to U of T's Faculty of Law will establish a constitutional centre named in the donor's honour. A significant portion of the gift - the largest ever to a law school in Canada - will also support the faculty's recently announced building renewal and expansion.

"David's gift will have a transformative effect on constitutional rights here at home and will also play a vital role in articulating Canada's constitutional vision to the broader world," says law dean Mayo Moran.

Asper, executive vice-president of Can-West Global Communications, says the gift stems from a commitment to the rights and freedoms enshrined in the Canadian Constitution. "Rights, freedoms and the rule of law are everything if we are to achieve enduring success as a civilization. It takes deep commitment to test, study and evaluate our state of freedom on an ongoing basis."

#### CALL FOR NOMINATIONS FOR ALUMNI MEMBERS OF THE **GOVERNING COUNCIL**

Are you actively involved with the University? Would you like to help shape its future?

Nominations open on Friday, January 11, 2008 for three alumni representatives on the University of Toronto's Governing Council, the senior governing body that oversees the academic, business and student affairs of the University.

Each position is for a 3-year term, beginning July 1, 2008.

#### **Qualifications:**

- · Alumnus(a) of the University of Toronto;
- · Canadian citizen;
- · Not a student or member of the teaching or administrative staff of the University;
- · Supportive of the University's mission;
- · Active participant in University and/or community
- Willing to learn about the University's governance;
- · Willing to make a substantial time commitment to the work of the Governing Council.

The membership of the Governing Council should reflect the diversity of the University. Nominations are, therefore, encouraged from a wide variety of individuals.

Nomination forms will be available starting at 12 noon on Friday, January 11, 2008 on the Governing Council website: www.governingcouncil.utoronto.ca

#### or from:

The Secretary College of Electors Simcoe Hall, Room 106 University of Toronto Toronto, Ontario MSS IAI 416-978-6576

Nominations close at 4 p.m., Monday, February 25, 2008.

For further information, visit www.governingcouncil.utoronto.ca



# $\mathsf{THE}$ How U of T law grad David Shore took one misanthropic doctor, added a large dose of twisted humour and created the hit medical drama House

BY STACEY GIBSON



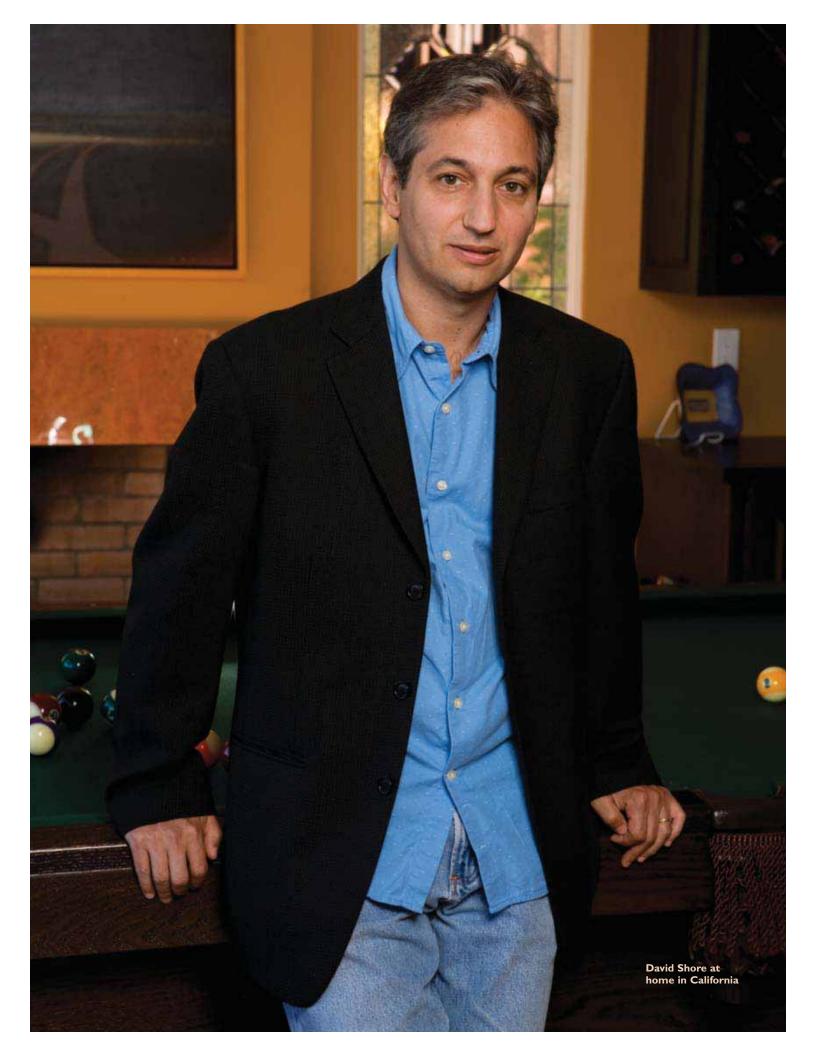
#### IT'S OCTOBER 6, AND A CROWD OFTV ENTHUSIASTS

has gathered at the Florence Gould Hall in Manhattan to hear "Outside the Box: Television Masterminds." The panel, part of *The* New Yorker Festival, features the creators of some of the edgiest shows discussing the occupational pleasures and hazards of writing for the small screen.

The 400-seat auditorium is sold out, each red velour seat occupied by the kind of audience member that only New York can attract. There are brassy matrons with Upper East Side accents wearing garishly patterned blouses and bright lipstick, and pale, thin 20something guys with wild mops of hair and retro T-shirts - apparently the cultivated look of aspiring screenwriters. And there's a

smattering of vaguely familiar actors, including Sex and the City's Stanford Blatch, Carrie's best guy friend, with a real-life coterie of four gal pals.

The empty stage projects the pretentious vibe of James Lipton's Inside the Actors Studio: black floor, black walls, tables with black tablecloths, even black director's chairs - the entire mise en scène as dark as a blank TV screen. Then, like a set flicked on, a colourful gaggle of writers and producers enter and take their seats. The panel is stacked with HBOers, who exist on the frontier or hinterland of the TV world, depending on your viewpoint. There's Jenji Kohan, the creator of Weeds - the show about the travails of a suburban mom who doubles as a pot dealer. ("Jenji," snickers a nearby 20-something guy. "Like, ganja.") David Milch, a dissipated-looking



# "House is smarter than I am, which allows him to get away with stuff. He's tolerated because he's right"

character in a rumpled brown blazer, is the panel's provocateur and the swaggering renegade writer behind HBO's Deadwood. Outer-space guru Ronald D. Moore developed a version of Battlestar Galactica for the Sci Fi Channel, and former Baltimore Sun reporter David Simon pens the HBO crime drama The Wire.

Sandwiched in the middle is David Shore (LLB 1982), a U of T Faculty of Law grad and the lone representative of the TV networks. Shore is the Emmy Award-winning writer, creator and executive producer of *House* - the Fox medical drama featuring the misanthropic Dr. Gregory House, a brilliant diagnostician who thrives on solving the most baffling medical puzzles. Shore looks like conservative Network TV Guy with his sharply pressed dark suit, polished black shoes, distinguished grey hair and self-confident demeanour. He takes a little good-natured ribbing from Kohan of Weeds, who jokes that *The New Yorker* bought Shore the expensive seat on the plane, while forking out less for her ilk. (House fetches 18-19 million viewers per episode, while *Weeds* weighs in at less than one million.) But when Shore recounts a story about an earlier writing gig, he displays an unconventional, subversive bite not usually associated with network types. "When I was writing for Law & Order, someone asked me, 'How come they always arrest and convict the bad guys?' I said, 'They don't.' He said, 'Name three [episodes].' I went back and counted three. They were all the ones I wrote."

The conversation winds its way to the issue of network control – how much say executives have over writers' scripts and the agenda of networks versus cable. Battlestar Galactica's Moore maintains that "cable pushes me to go further, networks reined me in." Deadwood's Milch argues that "the network is selling Massengill douches" and, clearly an advocate for no one, later adds, "Cable is selling 'It ain't TV - it's HBO." Shore counters that network execs exert little control over *House*, and freedom comes partially from viewer numbers. He points to an episode in which Dr. House gives the hospital administrator, Dr. Cuddy, an injection in her, ahem, posterior. They clearly couldn't show a rear view, but they could be a little cheeky from the side. "When you're getting a 19 share," he jokes, "it's OK to show more ass."

Later Shore adds that network control "tends to be about nudity and words - not about politics, not about the stance the character takes." Good thing, given that House, played by Hugh Laurie, is possibly one of the most contentious charac-

ters that network TV has ever seen. A Vicodin-addicted malcontent, House walks with a limp (his cane is painted with flames, he says, to "make me look like I'm going faster") yet metaphorically dances on the edge of a surgical blade. He can diagnose the most confounding conditions (29-year-old woman suffering from seizures? Have you considered the ham in her fridge? Tapeworm in the brain, anyone?). His methods, however, range from unorthodox to overtly illegal, such as sending hapless employees to break into patients' homes to find clues to their illnesses. House holes up in his office to avoid dealing with all of humanity - he believes patients always lie but symptoms never do - yet emerges long enough to alienate roomfuls of people, smiting them with acerbic lines that would send lawsuits flying onto lesser men. (He orders a Mormon doctor to stay away from a patient, or the patient will "start singing Osmond songs and proposing to five nurses at once" and tells a female colleague that her hair colour makes her "look like a hooker. I like it.")

like to think that he is a bigger asshole than I am. I like to think that I'm not an asshole," quips Shore, 48, over breakfast at Bryant Park Hotel's Koi Restaurant the next morning. Shore doesn't look like Network Guy anymore. He looks more approachable, like a hip, laid-back writer, with youthful looks, tousled hair and dark brown eyes suffering slightly from the shadows one possesses at ungodly Sunday morning hours. He's sporting topnotch Nike sneakers – a Dr. House trademark and Laurie's gift to the staff during the third season's wrap. "And House is smarter than I am, which allows him to get away with stuff. If he was of average intelligence with that same attitude and if he was wrong 50 per cent of the time, he would just never be tolerated. The only reason he's tolerated is because he's right, invariably. I don't think I fall into that category. But his attitudes, his outlook toward the intellect versus emotions, his outlook toward almost everything comes from me."

In 2004, Shore and executive producers Katie Jacobs and Paul Attanasio pitched House to Fox as a medical detective show, a hospital whodunit in which doctors sleuth their way through symptoms until they find the medical culprit. It was after the show was sold that the idea of a human touch -House – was added. His name is a twist on the granddaddy of all detectives, Sherlock Holmes. Shore found inspiration in Holmes' cold analysis, his search for an objective truth and

his fascination with puzzles – "although he was kinder than House," says Shore. The writings of the late Berton Roueché, *The New Yorker* staff writer who chronicled intriguing medical cases in a gumshoe style, inspired the plots for some of the show's early episodes.

House writers consult regularly with physicians to ensure accuracy, and Laurie, who hails from Britain, takes great pains to deliver tongue-twisting terminology with an impeccable American accent. ("He does a great job with it...but as

nity, but it also has chances for my personal perspective on the world." He pauses. "God, that sounds terrible."

Since debuting in November 2004, *House* has taken off in the ratings and now holds steady in Nielsen's top primetime TV shows of the season. For the week of November 5, *House* ranked number six. In 2005, Shore won an Emmy in the "Outstanding Writing for a Drama Series" category and a 2006 Humanitas Prize, both for his episode "Three Stories," in which House presents three narratives to a class



he says, he's playing tennis with a salmon instead of a tennis racquet," says Shore. "He's got to fake an accent and act at the same time. And, it's tough.") But unplug the heart monitors, wheel away the gurneys and yank out those IV tubes, and Shore maintains you'll still find a healthy storyline with general appeal. "In many ways I don't consider this a medical show.... The things that interest me in the show are the philosophical things. When House goes on, it's rarely about medicine, it's about the nature of right and wrong."

"There is a philosophical bent to the show, an opportunity to speak about life and how to live life," continues Shore, who is married with three children. "I think good shows always deal with ethical dilemmas and ethical questions. Good dramas are usually about throwing your characters into situations where, do you turn right or do you turn left? And something bad will happen if you turn right and something bad will happen if you turn left – which one's worse? This show has a lot of these moments, which is a great opportu-

of medical students, ultimately revealing the story of his own medical struggle.

hore grew up in London, Ontario, the eldest of three boys. (His younger twin brothers are now rabbis in Israel.) An avid TV watcher, he loved comedies and *The Rockford Files* detective series. But writing, for any medium, wasn't a career goal. After studying math for two years at the University of Western Ontario in London, he entered U of T's Faculty of Law. "I wanted to be a lawyer from the time I was 12 years old until the second week of law school," says Shore. "I didn't like law school. I liked it socially; it just wasn't right for me. I made good friends there, but academically I just kind of drifted through."

What he did enjoy was working on the Faculty of Law's student newspaper, *Hearsay*, which he edited with Mark Gray (LLB 1983) and David Hoselton (LLB 1982). (Shore succinctly summed up his take on law school in one issue of

#### So You Want to Write for Pictures?

From movies to TV and comedy to animation, here is a small sampling of U of T alumni who wrote their way to success south of the border.

Before he began his decades-long domination of Saturday's late-night airwaves with Saturday Night Live, Lorne Michaels (BA 1966 UC) produced and directed the student-run University College Follies. Some of Michaels' earliest gigs included writing for Rowan & Martin's

Laugh-In and The Beautiful Phyllis Diller Show. He and Hart Pomerantz (BA 1962 UC, LLB 1965) also wrote and performed in their own CBC variety show, The Hart & Lorne Terrific Hour, in 1970. Then, in 1975, Michaels created his oft-imitated, never-duplicated SNL, which has provided a hip launching pad for generations of comedians. Michaels is also executive producer of Late Night With Conan O'Brien, and has produced a multitude of movies associated with SNLers, including Mean Girls, Wayne's World and Tommy Boy.

Graham Yost (BA 1980 TRIN), who has written for both the big and small screens, comes by his love of movies honestly: his father is Elwy Yost (BA 1948), who hosted TVOntario's Saturday Night at the Movies for a quarter century. (Elwy once sent his son to school with the note: "Graham is late for school because I had him stay up late to watch Citizen Kane.") Yost is creator, executive producer and writer of Raines - the police drama featuring leff Goldblum as an LAPD homicide detective with an eccentric manner of solving murders (chiefly, having imagined conversations with dead victims). Yost was the creator and executive producer of the TV show Boomtown, and a writer on the miniseries Band of Brothers and the Sandra Bullock/Keanu Reeves flick Speed. He is now a writer and co-executive producer on the HBO miniseries The Pacific.

It's hard to mention David Hoselton (LLB 1982), a co-producer on House, without mentioning screenwriter Lorne Cameron (LLB 1982), given their extensive collaboration. The gig that started it all? The inaugural Law Follies in 1979 - which was emceed by their friend David Shore. More illustrious jobs were in their future: they wrote First Knight, featuring Sean Connery as King Arthur, the Disney-animated feature Brother Bear and the DreamWorks Animation film Over the Hedge.

As a writer at The Varsity student newspaper, Tim Long (BA 1992 UC) recognized he had a "knack for making fun of people," he told U of T Magazine in 2001. He parlayed that dubious gift into the kind of career not listed in guidance counsellors' handbooks: professional lampoonist. Long interned at Spy Magazine, and has been a staff writer at Politically Incorrect and head writer at The Late Show with David Letterman. He has now spent nearly a decade putting words in the cartoon mouths of the buffoonish brood The Simpsons. Long is a supervising producer on the show, and was also a consulting writer on The Simpsons Movie. -SG Hearsay, writing: "Law school, by design, is not fun. We have the rest of our lives to be boring.")

"Dave definitely pushed the envelope and still does today," says Hoselton, who is now a co-producer of House. "When we took the paper over it was called the University of Toronto Law School Newsletter - which was very imaginative. And it was filled with University of Toronto law school news. After changing the name to *Hearsay*, you can imagine what it was filled with. And we got into a little bit of trouble for trying to make it a little less reverent. It was always about amusing our-

> selves and taking chances with the material and going as far as we could possibly go with it."

> The newspaper featured plenty of offbeat, often sophomoric, humour - usually lobbed at faculty members and classmates. One "Fun with the Faculty" department invited readers to match profs with their likeliest method of committing murder; open-party announcements included the home addresses of unsuspecting students; and in the "Ask the Daves" column, the editors answered their own fake letters. (Sample question: "Dear Daves:

Everyone knows the Chipmunks were Alvin, Theodore and Simon, but what the heck was their manager's name? You know, the human guy? Dave." "Dear Dave: Dave.")

"There was some fallout from the same stuff I get fallout from today - the standards and practices department, which back then was the dean," says Shore. "If we did anything that was a little off-colour, we would hear about it." Frank Iacobucci was the dean at the time, but it fell to student liaison and Shore's close friend Lorne Cameron - now a screenwriter in L.A. - to relay the dean's directives. Says Shore, "I remember Iacobucci basically asked us to make fewer masturbation jokes. We didn't get that directly from the dean. In a way, for us, it was more fun that it came from Lorne." (Indeed, a tongue-in-cheek note from Cameron appears in one issue: "The buck stops here. Thus as vicepresident and chief returning officer, I must take full responsibility for Dave Shore's incompetence. There, I did it. Now leave me alone.")

Shore also found creative outlets on stage. He hosted the first annual Law School Follies and did standup gigs at clubs such as Yuk Yuks. He entered a comedy contest in his hometown, and his standup skills earned him the title The Third Funniest Person in London. ("One day, hopefully, I can fulfil my dream of working for the first funniest man in London," jokes Hoselton.)

After completing law school, Shore articled for one year in London, Ontario, and then practised corporate and municipal law for almost five years at a Toronto firm, where he made partner. His friends Cameron and Hoselton had moved to Los Angeles to write movies shortly after bar exams – and the idea of making a similar move was brewing in Shore's mind. In 1991, he readied to take a leap, with an initial plan to write comedy scripts and possibly do some standup. Shore recalls

breaking the news to his law partners. "I announced, 'I'm leaving in three or four months to go to L.A. to be funny.' And it got the reaction you'd expect from everybody. They thought I was insane. They said, 'You're not that funny." Shore negotiated the opportunity to return to the firm if things didn't work out within two years.

At 31, Shore rented a tiny one-bedroom apartment, one block from Hollywood Boulevard and not far from Mann's Chinese Theatre. He didn't take writing classes; instead, he read plenty of scripts. His first writing attempt was a film screenplay. "I showed it to my friends who were down there, and then I didn't show it to anybody else. It wasn't very good," he claims. Then he wrote a spec episode of *Seinfeld*—which his friends did like. He found an agent based on the strength of that and a spec *L.A. Law* script, and continued to develop his knack for TV writing. And approximately two weeks past his two-year deadline, he was offered a freelance writing gig for the TV show *The Untouchables*.

A year later, Shore landed his first staff-writing job, on *Due South*, the comedy-drama that followed Canadian Mountie Benton Fraser (Paul Gross) through his investigative exploits. Shore moved back to Toronto for the show, and in 1996 picked up a Gemini Award for Best Writing in a Dramatic Series for his work. That same year, Shore became head writer on and supervising producer of the Canadian show *Traders*. He then headed back to L.A. and wrote for some of TV's biggest hits, including *NYPD Blue* and the first season of *The Practice*. After garnering two Emmy nominations in 1998 and 1999 as a producer on *Law & Order*, he served as executive producer on *Family Law* and *Hack. House* came along in 2004, and Shore has been putting caustic lines into his main character's mouth ever since.

riting for television is a pressure cooker. Consider, the average film shoots two pages of a 100-page script a day and takes months to complete, while a weekly TV show shoots six to eight pages per day – and wraps up in eight days. The *House* crew works on multiple episodes at once: while one is being shot and another prepped, writers are completing the next script.

Ninety per cent of Shore's job is writing – and rewriting. He heads a team of 13 writers, who work individually or in pairs on an episode. Shore meets with them about the stories they're working on, then provides extensive feedback on their initial outline and first draft. On the second draft, he polishes or rewrites – a process that takes one to four days. Before an episode is shot, Shore walks the director through the script, telling him what each scene is about and the moments he wants to capture. And about half-a-dozen times a day, he's called to the set to watch a rehearsal and give his input before the shooting takes place. So, even though Shore's name may not be on the script, it always contains his voice, ensuring the show has a consistent look and feel.

And, of course, the character of House has its own particular challenges – such as creating those outrageous House moments without being gratuitous. "The audience is expecting, 'What crazy thing is he going to do that's going to shock me this week?' And how am I going to shock somebody who's expecting to be shocked? I'm hiding in the closet about to jump out and yell 'boo,' and the audience is standing outside the closet waiting for the door to open. But you've got to keep it organic, it's got to be true to the character. Internally, what I say is, 'The punishment may not fit the crime, but there's always a crime. If House is giving somebody crap, there's a reason he's giving them crap." Otherwise, laughs Shore, "he becomes a jerk as opposed to an interesting jerk."

espite the inventive writing in many shows, TV is vilified in a manner that other creative mediums are not. Perhaps it's because shows get lumped together with the lowest common denominator – if, say, *Dancing with the Stars* is accruing the highest audience numbers, people tend to link TV with Marie Osmond lurching around in tights. Or, perhaps it's accessibility that breeds contempt. As Shore says, "It's a mass medium, and I think there's a tendency for us to dismiss anything that, 'oh well, everybody's enjoying it, it must not be that good. It's not just for us smart people."

Shore recalls a dinner party at his brother's house, where a guest announced he had sworn off television. "It was a big dinner party, I was just sitting there and nobody knew what I did, and he said, 'I got rid of my TV. I haven't watched TV in six months.' And everybody around the table was like, 'Good for you! Excellent! Oh God, I know how hard that is!' It was *literally* like the guy said he had given up heroin. And I'm sitting at the end of the table, the guy who is outside the schoolyard, going, 'Hey kid, come *here*."

Despite the analogy to TV writer as dealer, Shore believes that perceptions of TV are changing – partly because it has become so diffuse, with so many channels and shows targeting niche audiences. "I do think television is storytelling. I'm in the storytelling business, and when did that become bad? Why is TV somehow worse than books – OK, because books make you use your imagination. Well, why is TV worse than movies? Why is TV worse than plays? You know, theatre – my God, you're a playwright, that's so tremendous. But if it's something that's getting filmed, somehow you're a hack."

And House, with his inherently rebellious nature, offers plenty of fodder for a storyteller. After all, he's the guy with the chutzpah to say everything you think – and much, *much* more. Does Shore share some of the same rebelliousness as his fictional creation? "I'm a rebel in the sense that I do look at things and, like anybody does, go, 'Oh God, give me a break," he says. "I am just in a situation where I've got a pulpit to actually say 'give me a break' to 19 million people."

Stacey Gibson is the managing editor of U of T Magazine.

# TANGLING

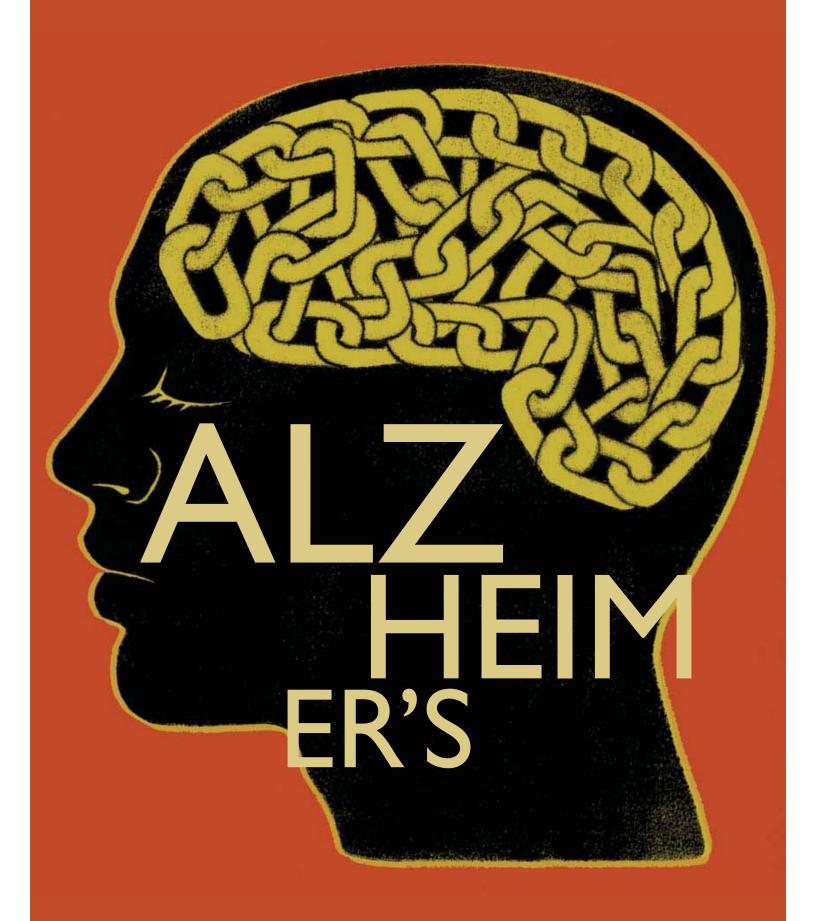
DOWNTHE GENES **DEBILITATING** BRAIN DISFASE. **CLOSER TO A CURE** BY SCOTT **ANDFRSON** 

#### Five years ago, Mary McKinley began to notice that

simple tasks at the office where she worked were taking her longer than usual to complete. Ringing telephones and clacking keyboards distracted her. She became easily confused and couldn't sit at her desk for longer than an hour without taking a break outside, away from the din. At first she thought there was a problem with the air in the building. But none of her co-workers were complaining.

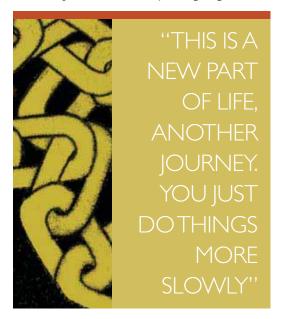
The confusion persisted, so McKinley, 63, found a new job in a quieter environment at a lawyer's office, not far from her home in Picton, Ontario. One morning, she forgot how to turn her computer on. Not long after, while making bread, she poured flour into the sink instead of the breadmaker. Putting in dentures – something she'd done every morning for years - suddenly proved baffling. "At that point," she says, "I knew something was screwy."

McKinley booked an appointment with her doctor and underwent a battery of tests, including a mini-mental state examination - 11 questions that physicians commonly use to screen for dementia. The doctor asked McKinley to state the day's date and the location of his office. He asked her to fold a piece of paper in half and put it on the floor. When he asked her to count backward from 100 by sevens, her brain seemed to freeze; she couldn't remember how. McKinley says the doctor's eventual diagnosis – Alzheimer's disease - came as a complete surprise to her. "I didn't know



much about Alzheimer's, except that it affects old people," she told me one sunny afternoon in October. "And I didn't feel that old."

r. Peter St. George-Hyslop didn't know much about Alzheimer's disease, either, when he was a second-year medical student at the University of Ottawa. He recalls examining a woman who exhibited no physical problems but appeared confused and couldn't remember why she had come to see a doctor in the first place. "It was very intriguing to me,"



says St. George-Hyslop, now a U of T professor and leading authority on Alzheimer's. "Everything worked, except her faculties of higher reasoning."

A talented medical student who graduated at the age of 21, St. George-Hyslop went on to train in neurology and internal medicine and do post-doctoral work in molecular genetics at Harvard Medical School. There, he began investigating the genetic underpinnings of Alzheimer's, a cruel and, as of yet, incurable disease that gradually robs patients of their memory and all higher thought processes. St. George-Hyslop was intrigued by the gooey plaques and tangled fibres - first observed by the German physician Alois Alzheimer more than 70 years earlier that develop in the brains of those with

Alzheimer's. In 1990, he returned to Toronto, to U of T's newly established Centre for Research in Neurodegenerative Diseases (CRND), to continue his work in genetics and study how these plaques and tangles form. Today, he leads the research efforts of more than 60 CRND staff as they hunt the genetic causes of - and potential treatments for - some of humanity's most debilitating brain illnesses, including Alzheimer's.

It's an immense undertaking. Research into the genetic causes of a disease is an extremely complex, time-consuming and competitive process that involves gradually narrowing down the location of one or more genes from the estimated 20,000 that comprise the human genome. In his book, The Selfish Gene, Oxford University evolutionary biologist Richard Dawkins compares the human genome to 46 rolls of ticker tape - corresponding to the 46 human chromosomes. On these ticker tapes is written an individual's entire DNA code, comprising some three billion coding units called "base pairs." Dawkins defines a gene as a section of code on one ticker tape, with nothing to clearly mark the end of one gene and the start of another. One can understand, then, why locating a specific gene is so difficult.

By the time St. George-Hyslop arrived at CRND, the race to be the first to identify a major gene responsible for Alzheimer's was in full swing. In 1992, scientists narrowed the search to a large section of Chromosome 14. Through some clever detective work and painstaking analysis over the next few years, St. George-Hyslop and his team eventually identified a single mutation in a previously unknown gene on Chromosome 14 as a cause of earlyonset Alzheimer's. The gene, which they called "presenilin 1," heralded CRND's arrival as a significant international force. "That really was a fiercely competitive piece of research," recalls St. George-Hyslop, noting that several other academic groups and biotech companies had been hunting for the same gene. Being first confers a range of

advantages: international accolades and attention, and the likelihood of greater research funding. "In terms of getting grants, it's much better to say, 'I was first," says St. George-Hyslop, who seems to appreciate such accolades more for their help in advancing the centre's mission than any sense of personal reward. "I like an interesting problem and a neat solution. I prefer not to be publicly outlined."

CRND's discovery of presenilin 1 (and, a few months later, presenilin 2) helped guide the direction of subsequent research into Alzheimer's disease. As St. George-Hyslop explains, the presenilin genes produce proteins that initiate the disease. He understood that by learning how these proteins interact with each other and the neurons they destroyed, he and his team might be able to point the way to new Alzheimer's treatments. They might, for example, be able to propose how to stop the body from producing the amyloid-beta protein that causes the toxic plaques, remove it from the brain or prevent it from aggregating into plaques. Then, they might be able to provide new hope for the millions of people worldwide and the 300,000 in Canada - who suffer from Alzheimer's disease.

octors advise Alzheimer's patients to stay as active as possible, since studies show that physical and mental stimulation may help slow the disease's inevitable progression.

McKinley, who enjoys doting on her 10 grandchildren, couldn't imagine not living an active lifestyle. "If you sit and dwell on it, and think 'Poor me,' you'll go downhill fast," she says. Instead, McKinley, now retired, writes a weekly blog and still manages to bake bread every other day. Last summer, she and her husband, Jim, cycled the country roads outside of Picton on a tandem bike. For a while, she hosted an online chat room for Alzheimer's sufferers and caregivers run by the Fisher Center for Alzheimer's Disease at Rockefeller University in New York City. She still spends several hours a day online,

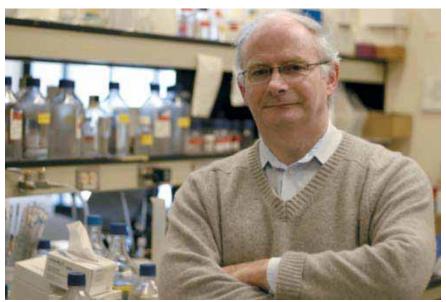
researching her condition and sharing information about it with some of the more than 600 people she's met in the chat room in the past two years. Gregarious by nature, McKinley keeps a detailed record of everyone she meets. "I love chatting with people," she says.

So far, McKinley hasn't experienced the debilitating short-term memory loss that affects most Alzheimer's patients. In fact, this oddity cast some doubt on McKinley's diagnosis. Dr. Sandra Black, the head of neurology at Sunnybrook Health Sciences Centre in Toronto, tested McKinley and told her she has a form of frontotemporal dementia, a condition similar to Alzheimer's. After running additional tests, Black changed her mind and now believes the original diagnosis is correct. "It seems to depend on what my brain is doing on any given day," shrugs McKinley, who also suffers from poor balance, an early indication of Alzheimer's.

Medications have eased McKinley's symptoms. She takes Aricept and Ebixa - drugs that temporarily reduce the telltale signs of Alzheimer's but don't halt or slow its progression. Since starting the two drugs about a year-and-a-half ago, "things have gotten better and better," she says.

Still, the disease has forced McKinley to adapt. She gave up driving after a scare while overtaking a farm tractor on the road to Picton. (She noticed an oncoming truck and couldn't decide whether to slow down or speed up to pass.) She doesn't enjoy dinner parties; the loud, overlapping conversations confuse her. McKinley uses a walker outside the house to keep her balance. Inside, she steps carefully, placing one hand on the furniture, a wall, the door, to steady herself. Despite facing daunting challenges and a grim prognosis, she refuses to succumb to anger or self-pity. "This is just a new part of life, another journey," she says, philosophically. "You just do things a little differently: a little more slowly."

Like many Alzheimer's patients and their caregivers, McKinley watches closely for news of drug developments.



Dr. Peter St. George-Hyslop, director of U of T's Centre for Research in **Neurodegenerative Diseases** 

She tells me about a potential new drug that's designed to prevent the amyloid plaques from forming in the brain. "A few people say that it will reverse symptoms," she says, hopefully. "There's a lot of talk in the chat room about that."

rom the moment a scientist isolates a molecule with intriguing therapeutic potential to the day Health Canada approves it for public use is a long and tortuous journey with many potential dead-ends. The whole process often takes a decade or longer, and the vast majority of potential drugs don't make it out of the testing phase. Earlier this year, Quebec-based Neurochem announced plans to market Alzhemed, its leading Alzheimer's candidate drug, as a nutraceutical (a dietary supplement) rather than a drug after testing in patients failed to show conclusive positive results.

Patients and caregivers grasp at any hint of hopeful news, which is why St. George-Hyslop is careful to be realistic about CRND's efforts in the area of potential therapies. Yes, pharmaceutical companies are testing some interesting possibilities as a result of the centre's research, but no, there's nothing that actually slows the disease in Alzheimer's patients – yet. He prefers to steer attention to the centre's inves-



Dr. Paul Fraser studies proteins in the body that cause Alzheimer's

tigations into the biology of how the disease progresses.

Since St. George-Hyslop and his team identified mutations in the presenilin genes as a cause of Alzheimer's, some of the centre's researchers have been seeking to understand exactly what the presenilin genes do and how mutations in these genes lead to the disease. As is often the case with scientific investigation, things are significantly more complex than they first appear.

Paul Fraser, one of CRND's principal researchers, has worked closely with St. George-Hyslop since arriving at the centre in 1991. Fraser earned a PhD in biochemistry at U of T and did post-doctoral work in neurobiology at Harvard ₹



#### AREYOU AT RISK OF **DEVELOPING ALZHEIMER'S?**

Genetic testing may provide an answer – but it's rarely decisive and can have unexpected consequences

eople with a family history of Alzheimer's disease may consider genetic testing to find out if they are at risk. But experts say the tests are only useful in certain circumstances, and they raise a host of thorny personal and legal issues.

Two types of genetic tests exist for Alzheimer's. A predictive test determines whether an unaffected person has a very high chance of developing the disease, but is useful for only the small number of people who carry a genetic mutation causing the early-onset form. (At least 90 per cent of Alzheimer's cases are late-onset and not clearly hereditary, so a negative test result doesn't rule out the possibility of developing the disease.)

Another test, known as genetic risk assessment, indicates if someone has a somewhat greater likelihood of developing Alzheimer's, but it can't predict with any certainty who will or will not develop the disease. Because the test is not predictive, it's not offered as a clinical service in Canada.

People considering genetic testing for Alzheimer's will want to think carefully about how a positive result could affect them - and family members - psychologically, since there is no long-term effective treatment or cure. They may also want to think twice before stepping into a legal grey zone, says Trudo Lemmens, a U of T law professor and coauthor of the book Reading the Future? Legal and Ethical Challenges of Predictive Genetic Testing. Lemmens says the law is still unclear, for example, about who can use the information from a genetic test and for what purpose. Should insurance companies be able to screen people on the basis of a genetic test? What about adoption agencies and employers? "Risk of early death is certainly information that would be interesting to some of these groups," he says.

As the tests become cheaper to conduct, Lemmens says insurance companies could use genetic information to deny coverage or charge higher premiums to individuals with an increased risk of developing a life-threatening disease. In theory, employers could use it to exclude employees with undesirable traits from the workplace, and adoption agencies could use it to rule out some prospective parents.

On the other hand, there are situations in which the genetic test results could prove beneficial. For people who have a family history of Alzheimer's, a negative result could yield a reduction in insurance premiums. (These people normally pay higher premiums, since insurance companies already use family medical history to assess an individual's health risks.)

To guard against the misuse of genetic information, the law should regulate who can conduct genetic testing and for what purpose, says Lemmens. "This is a fundamentally personal decision. We don't want people to be forced to undergo genetic testing for employment or insurance purposes, for example, and to know something they didn't want to know." - SA

Medical School. He has spent a lot of time investigating the presenilin genes, which, it turns out, regulate not just a single protein in the brain, but a whole family of proteins involved in producing amyloid. Scientists have uncovered four major proteins, says Fraser, but there are "probably many more that impact on each of those four." In 2006, Fraser was part of an international research team led by the University of Toronto that uncovered TMP21, a naturally occurring protein in the brain that *inhibits* the production of amyloid.

Figuring out what all these proteins do and how they interact will be a time-consuming process, requiring years of lab work. But the knowledge should yield some promising avenues for new therapies. Teasing out exactly how TMP21 inhibits amyloid, for example, and why it doesn't affect other functions in the presenilin complex could provide a blueprint for an effective drug. (Presenilin governs several important signalling processes in the brain, and previous attempts to block or slow the production of amyloid have resulted in serious complications in patients.)

On another front, the centre has conducted research that could lead to an Alzheimer's vaccine. In 2000, St. George-Hyslop and his team showed that a vaccine worked in a mouse model of Alzheimer's. The vaccine went into clinical trials, but the trials were stopped when some of the immunized patients developed brain inflammation. Since then, CRND's researchers have shown what may have caused the toxic effect. This work has served as a basis for the development of new, refined vaccines.

Last year, CRND researchers published a paper in *Nature Medicine* describing a molecule that prevents the amyloid protein from aggregating into toxic plaques. The centre tested the molecule in a mouse model of Alzheimer's and found it improved the mice's cognitive ability. CRND has licensed the potential drug to Toronto's Transition Therapeutics for testing in humans. In August, Transition announced the successful completion of Phase 1 clinical trials (to test the drug's tolerability in healthy humans) but has yet to start Phase 2 trials (to test tolerability in people with Alzheimer's). At this early stage of development, the drug is still a long shot to succeed.

Despite all of these intriguing therapeutic possibilities, St. George-Hyslop believes an effective Alzheimer's treatment may still be many years away. He compares our understanding of the disease today to where cancer research was 20 years ago. The first generation of anti-amyloid drugs are being tested and, until the results are in, "all bets are off," he says. Although confident that new therapies will slow the disease and may even induce a slight improvement in patients, he's doubtful that removing the amyloid plaques is the end of the story.

St. George-Hyslop is particularly concerned about the tangled fibres that form inside diseased neurons. Although it's possible that treating the amyloid will be all that's necessary to bring about improvements in Alzheimer's patients, the amyloid may, in fact, have caused tangles to form or irreversibly damaged neurons in other ways. In other words, simply removing amyloid from the brain, or preventing it from aggregating, may not be enough. (Scientists now believe that amyloid builds up in the brain for years, or even decades, before patients start to show symptoms.) St. George-Hyslop worries that the tangles, which are deadly to neurons, may cause the disease to progress until they are stopped. "That's a major concern at this point," he says.

Research into any disease proceeds in three phases: first, understanding its causes and how it works; then, designing treatments to stop or prevent it; and finally, repairing the damage it has caused. So far, most Alzheimer's research falls into the first category; work on the second phase, designing treatments, is just beginning. However, CRND is now looking for researchers for the final stage - studying how neurons are born, move around the brain and connect with each other - in the hope of being able to repair brain damage.

Last spring, St. George-Hyslop won the \$5-million Premier's Summit Award, which recognizes world-class research in Ontario. He will use the money to recruit researchers interested in neuronal repair. This type of study is in its infancy, but could have huge implications not only for people with Alzheimer's disease, but for individuals who have had a stroke or who have a

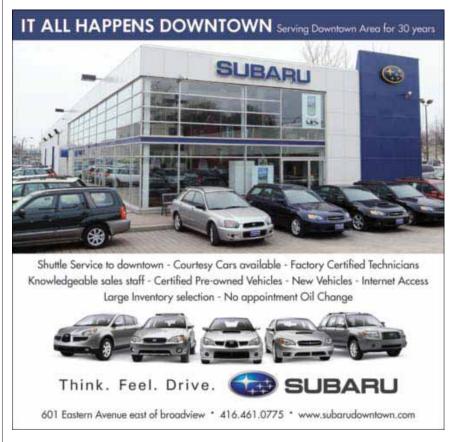
brain tumour or mental retardation, says St. George-Hyslop. "Even in a simple animal, such as a worm or fly, understanding these processes is going to be very difficult. In humans it will take a decade or two."

As with all research endeavours, money is crucial - and not always easy to come by. For the bulk of its funding, CRND relies on peer-reviewed research grants and donations from individuals and non-profit societies interested in neurodegenerative diseases. Although a \$5-million grant is considered unusually large in Canada, St. George-Hyslop says it would be fairly typical in the U.S. With its funding limits, CRND must choose its projects carefully. "Right now we're constrained to pursuing a number of main ideas, but there are many other projects we could do in six months or a year if we had the resources," he says.

In the meantime, the difficult lab work continues. St. George-Hyslop doesn't encounter Alzheimer's patients on a day-to-day basis, but the centre has relationships with many of the families who have donated DNA for studies. He's aware that they're grateful for the groundbreaking research at CRND, but he's not prepared to accept any plaudits - not until an effective treatment is found. "We haven't accomplished our goal yet," he says.

cKinley understands that her condition will worsen. She remains hopeful, however, that the work of St. George-Hyslop and other researchers around the world will lead to an effective treatment and, one day, a cure. In the meantime, McKinley knows that, despite the drugs she is taking, she will gradually lose the ability to do many of the things she likes, such as baking bread and cycling with her husband. I ask her if she fears for the future. She shakes her head, smiles. "I'm loving life and I have a very good feeling with God," she says. "I have no problem moving on."

Scott Anderson is the editor of U of T Magazine





from U of T, will launch the most ambitious science experiment ever devised. Their goal: to unlock the secrets of the universe

BY DAN FALK

Research – known by its French acronym, CERN – occupies a sprawling complex on the outskirts of Geneva, Switzerland. The cluster of nondescript white buildings doesn't look much like a science laboratory, let alone one of the foremost labs in the world. But here, in just a few months, physicists and engineers from around the world will fire up a machine to answer some of the most fundamental questions about the structure of the universe. To a first-time visitor, only the street signs – Route Newton, Route Einstein – offer a hint of what is going on here.

The real excitement is below ground. Accompanied by an official from CERN's press office, I make my way to the northeastern corner of the complex – to Building 2155 – where Mike Lamont, a senior CERN engineer, greets me. Lamont hands me a hard hat and ushers

me through a series of security doors and into what looks like a large freight elevator. We descend 80 metres below ground to the Large Hadron Collider (LHC). When it's switched on this spring, the \$8-billion facility will be the world's largest and most powerful particle accelerator – and the biggest, most complex science experiment ever devised.

The accelerator is being built in a tunnel that's shaped like an enormous doughnut, 8.5 kilometres in diameter. Longer than the London Underground's Circle Line, the tunnel straddles the border between Switzerland and

France, lying underneath towns and farms in both countries. As I look down the length of the tunnel's concrete walls, I can just see where it begins to curve. Lamont tells me that were I to broach the security doors and enter the tunnel when the accelerator was running, the radiation would make my visit brief. "You'd be dead within a few minutes," he says dryly.

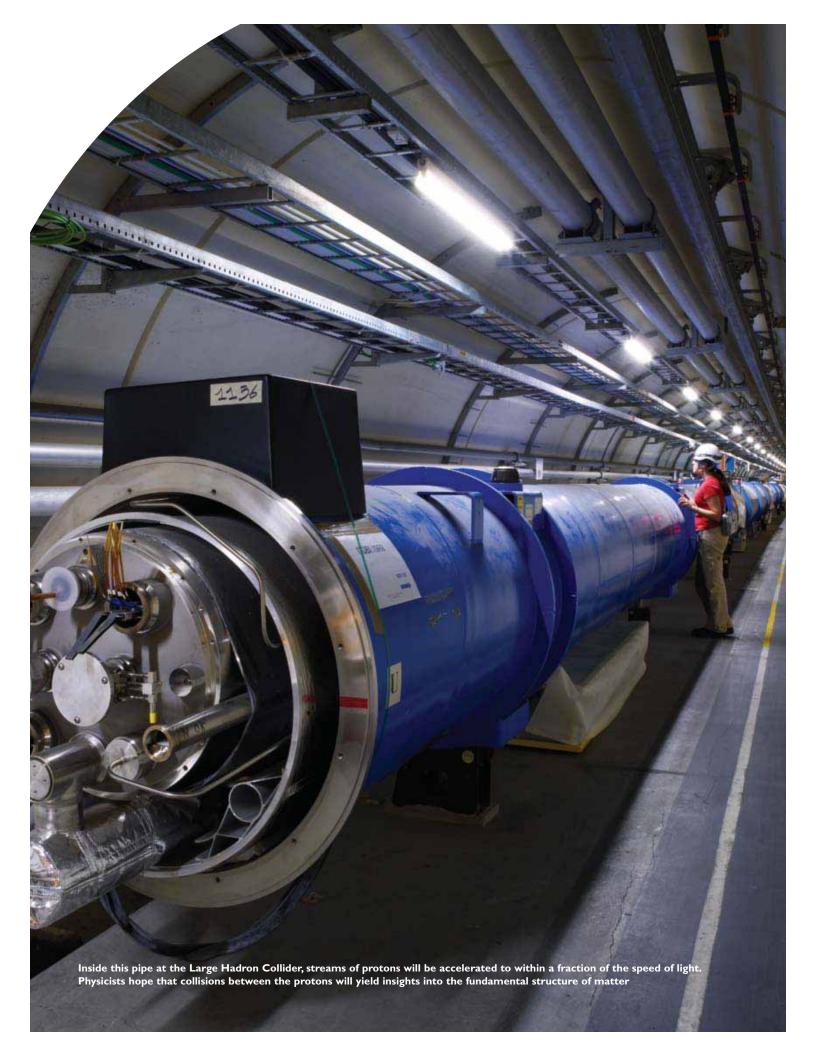
Work crews are still constructing the LHC, although the section we're visiting is almost complete. As Lamont and I stand by the tunnel wall, the only sounds we can hear are the rumbling of

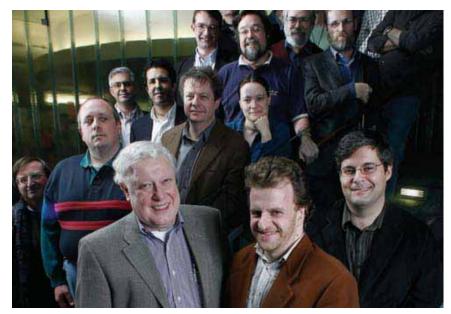
vacuum pumps and the distant footsteps of engineers and scientists. In front of us is a blue and silver metal pipe about a metre wide, which runs the length of the tunnel. Lamont explains that inside the pipe, streams of

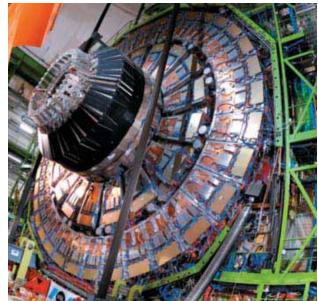
protons will be accelerated to within a fraction of the speed of light. (The protons will move so close to the speed of light, in fact, that if they chased a beam of light on the four-year journey to Alpha Centauri, the nearest star to our sun, they'd lose the race by a single second.) The world's largest array of superconducting electromagnets will steer the accelerated protons around the pipe. To keep the current flowing in these magnets resistance-free, huge tanks of liq-



HOTOGRAPHY: © CERN GENEVA







Above: A large contingent of University of Toronto physicists is working at the LHC; in the front row, from left are Robert Orr, Richard Teuscher and William Trischuk. Right: A section of the Compact Muon Solenoid, one of four particle detectors at the LHC

uid helium will cool them to a temperature of 1.9 degrees above absolute zero – about one degree colder than outer space. The protons will zip around the pipe at a rate of more than 11,000 laps per second, passing breezily back and forth between France and Switzerland on every lap.

At the same time, the scientists will send a second stream of protons whizzing through the pipe in the opposite direction. The debris from the resulting proton collisions will be like gold to the physicists – who include a large U of T contingent. The LHC will allow scientists to glimpse exotic particles and, by simulating the conditions in the early universe, help them understand how the fundamental building blocks of matter interact. Experiments at the LHC could help explain why there's so much matter and so little antimatter in the universe. They could give physicists a peek at possible extra dimensions beyond the three dimensions of space – and one for time – that we're familiar with. And, perhaps above all, they may help explain the origin of mass – why the universe is full of stars and galaxies in the first place.

Erich Poppitz, a U of T theoretical physicist who was spending a month at CERN when I visited last summer, described the LHC as "the most important experiment to come online in particle physics in the last 20 or 30 years. It is certainly the most important experiment in my lifetime in physics."

#### PARTICLE PHYSICS HAS COME A LONG WAY SINCE

scientists first began to probe the structure of the atom at the start of the 20<sup>th</sup> century. While the ancient Greeks imagined that the atom's nucleus was an indivisible entity, scientists now know that the nucleus is made of two sorts of heavy particles – protons, with a positive electrical charge, and neutrons, with no charge. Swirling around these heavy particles are much lighter electrons, with a negative charge. By the 1970s, the number of fundamental particles (those thought not to be made up of anything smaller) swelled dramatically. Scientists discovered that protons and neutrons were made

up of two kinds of quarks, dubbed "up" and "down." Four other quarks, given such fanciful names as "charm," "strange," "top" and "bottom," rarely show themselves in nature but have been created in particle accelerators. The electron has heavier cousins (also carrying a negative electrical charge) known as the muon and the tau. Physicists have also learned that the electron, muon and tau are each associated with a tiny, chargeless particle called a neutrino. And a handful of messenger particles, known as bosons, mediate interactions between all of the other particles. (If we think of quarks and electrons – the building blocks of solid matter – as political leaders, then bosons are the diplomats who shuttle information back and forth between them.) The mathematical description for these particles and their interactions is the Standard Model of particle physics.

In many ways, the Standard Model - developed more than 30 years ago - has held up remarkably well to experimental scrutiny. Several particles predicted by the model have subsequently been observed. (Scientists postulated the existence of the W and Z bosons in the late 1960s and discovered them at CERN in the 1980s.) The theory still suffers a significant flaw, though. A particle called the Higgs boson, first theorized in 1964 by Scottish physicist Peter Higgs, has yet to be observed. Finding the Higgs is a priority of LHC scientists. "It is really the one missing piece of the Standard Model," says Richard Teuscher, a U of T experimental physicist who has been working on the LHC for nearly a decade. "It's as if you've taken a whole chunk out of the puzzle; it doesn't hold together." In the world of particle physics, the Higgs shoulders a lot of responsibility. Some physicists jokingly refer to it as "the God particle."

The Higgs boson is a vital part of the Standard Model because it explains why other particles exhibit the mass that they do. It explains, for example, why the top quark is so heavy (it's almost as massive as an atom of gold), and why the electron is so light. The Higgs is thought to create a field (like

PHOTOGRAPHY: LEFT: GLENN LOWSON: RIGHT: © CE

"Exotic particles could turn up for the first time since the big bang, 13.7 billion years ago"

an electromagnetic field) that permeates all of space. This field makes other particles seem heavy as they struggle to move through it. John Ellis, a theorist based at CERN, provides the analogy of a snowcovered field: "Imagine various people trying to cross the field," he says. "If you're wearing cross-country skis, you can go pretty fast." The skiers correspond to a massless particle, like the photon, which travels at the speed of light. Now, consider

somebody on snowshoes. "They go somewhat slower; they sink a little bit into the snow – they don't travel at the speed of light, and for us that means that they have a non-zero mass." Finally, consider someone trying to cross the field in hiking boots. "They're going to sink way down into the snow; they're going to go very, very slow indeed - and that will be a particle which has a very large mass."

Most theorists are confident that the Higgs boson exists, believing that the only reason why no one has observed it yet is because of its large mass. Until now, no particle accelerator has been powerful enough to bring the Higgs into view. "For me, as an experimental physicist, until I've seen it, touched it, played with it, manipulated it in the lab, I don't think we really have an understanding of it," says William Trischuk, a U of T physics professor. "We have a mathematical model. Until we actually make one, it's not really physics." If the Higgs is real, the LHC ought to be able to find it - or else show that it doesn't exist.

Like many of the U of T faculty involved in assembling ATLAS, Teuscher is spending most of his time at CERN these days - especially now that the final stages of the detector are taking shape. Besides professors Teuscher and Trischuk, five other U of T physicists are directly involved with ATLAS: Robert Orr, who heads Canada's ATLAS team; Pekka Sinervo, who will be stepping down as dean of the Faculty of Arts and Science next summer to work on the detector; and professors David Bailey, Peter Krieger and Pierre Savard. More than a dozen research associates and students (graduate and undergraduate) are also involved.

Teuscher points out some of ATLAS's shiny metal components, explaining that magnets will steer the particles, calorimeters will measure their energy content, and a variety of tracking devices and detectors will record where the particles end up. A staggering array of electronic equipment will keep ATLAS's parts working in concert. Many of the components that make up the calorimeters were built at U of T and shipped to CERN, where they will help Teuscher and his colleagues identify the particles being created deep within the detector.

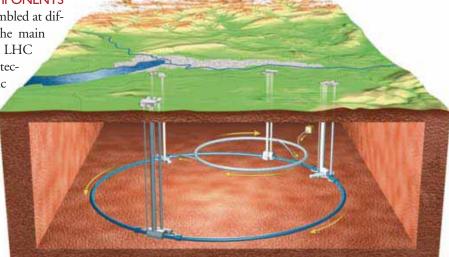
The protons that will whiz through the accelerator will contain enormous amounts of energy. When they collide, some of that energy will be converted into matter, or particles with mass. (Einstein showed us how mass and energy are related with his iconic equation,  $E = mc^2$ .) Usually these particles will be the familiar kind: quarks, electrons and muons. But very occasionally, the collisions may produce new particles, such as the long-sought-after Higgs. Other exotic particles that newer theories have proposed could also turn up - perhaps for the first time since the big bang, some 13.7 billion years ago.

While the LHC is better equipped than any other accelerator to create these exotic heavy particles, detecting them will still be enormously difficult. Heavy particles decay in an

#### THE LHC'S MOST SOPHISTICATED COMPONENTS

are four particle detectors that are being assembled at different points along the circumference of the main tunnel. ATLAS (which stands for A Toroidal LHC ApparatuS) is one of the largest of these detectors. Scientists hope it will identify the exotic particles that appear when the two beams of protons smash into one another.

Like all of the LHC detectors, ATLAS lies deep below ground, in a concrete cavern that's roughly the size of the main lobby of Toronto's Union Station. Professor Teuscher guides me along the scaffolding that surrounds what looks like a jet engine if you can imagine a jet engine the size of a small office building. When it's finished, ATLAS will weigh 7,000 tonnes and be made from the same amount of steel that was used to construct the Eiffel Tower, says Teuscher.



This computer-generated image shows the location of the 27-km long LHC tunnel (in blue). The four particle detectors are located in underground caverns (in grey) connected to the surface by 50 m to 150 m shafts

# "Catching particles is not like collecting butterflies with a net. It's more like identifying the Cheshire cat based on a snapshot of its fading smile" really exists. Plus, sl

infinitesimally small fraction of a second, leaving

really exists. Plus, she adds, it "gives both teams a push

only a puff of more familiar, stable particles. It's this burst of secondary particles that ATLAS will detect. And with a clear picture of what these particles are doing – how fast they're moving and in what direction – physicists hope to work backward to deduce what kinds of particles popped into existence inside the detector before they vanished. Apparently, catching particles in not quite like collecting butterflies with a net; instead, it's more like identifying the Cheshire cat based on a snapshot of its fading smile.

To find the elusive Higgs, physicists will wade through oceans of data. The LHC will produce a staggering 600 million proton collisions every second. The raw data from the collisions will flow out of the detectors at a rate of 28 gigabytes a minute – enough to fill three million DVDs a year. Teuscher says that most of the collisions will be "uninteresting" – the protons will "just scatter off at an angle" rather than collide with the full force of the accelerator. "But a few times, there'll be very interesting collisions," he says – perhaps as many as 200 per second. That's still an enormous amount of data, and it's no surprise that physicists at the LHC will spend a lot of time at their computers – writing the programs to sift through the numbers, highlighting some collisions and ignoring others, and carefully examining the results.

The ATLAS team won't be the only group looking for the Higgs. A second detector, the Compact Muon Solenoid (CMS), sits just a few kilometres down the tunnel. (The word "compact" is misleading; when CMS is finished, it will weigh more than 12,000 tonnes.) CMS, like ATLAS, is being assembled in its own enormous underground chamber. It's more of a "friendly competition" than a race, says Claire Timlin, a PhD student at Imperial College in London who is now based at CERN to work on the final stages of the CMS detector. If both teams are able to glimpse the fabled particle – two detections from two very different machines – it will confirm the idea that the Higgs

adds, it "gives both to achieve as much as they possibly can."

In the 30 years since proposing the Standard Model, theoretical physicists have forged ahead with ever-more complex theories to explain how the universe works. One such theory - string theory - envisions a universe composed of tiny vibrating strings, along with unseen extra dimensions and perhaps universes beyond our own. Physicists are also looking for signs of supersymmetry - a model that suggests that the particles we have observed each have heavier, notyet-seen partners. Supersymmetry could help explain why the masses of the known particles differ so greatly, and assist in the construction of the long-sought unified theory of physics. Yet without evidence that either supersymmetrical partner particles or string theory's hidden dimension exist, such musings remain only that. Data from the LHC may finally show which of these new ideas is worth exploring further and which is a dead end.

Finding evidence at the LHC to support extra dimension or supersymmetry theory would herald a revolution in our view of the universe, says Teuscher. "For the first time, we'd have proof that these are not just dreams of ours – that they're really something solid." It's no wonder that the completion of the LHC is one of the most anticipated events in the international physics community. When the LHC comes online next summer, it will mark the high point in the careers of hundreds of scientists. These theorists and experimentalists have been waiting for decades to see what lies beyond the familiar quarks and photons and electrons of the Standard Model. "It will be all unknown," says Teuscher. "It will be like going to a continent for the first time and exploring a new, uncharted territory."

Dan Falk is a science journalist in Toronto and the author of Universe on a T-Shirt: The Quest for the Theory of Everything. He is writing a book about time, which McClelland & Stewart will publish in 2008. ■



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From left: Joseph Mulongo, Kirk Perris and Mira Gambhir are among the 1,650 graduate students enrolled at the Ontario Institute for Studies in Education. OISE celebrated 100 years of studies in education at U of T with a centennial birthday party in November

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Wenda Oprea (MASc 2004) and Lean Windisch (BASc 2006) used electronic pipettes while conducting experiments at a Mining Building lab

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The King's College Circle Heritage Society recognizes and honours those alumni and friends who have thoughtfully made a provision for the university through a future bequest, life insurance or trust gift between January 1, 2004, and April 30, 2007.

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University of Toronto Varsity Blues captured their 10th national field hockey title with a 1-0 overtime victory against the Guelph Gryphons in November at Varsity Centre. The centre, which opened in 2006, is the first phase of a redevelopment of U of T's athletic facilities that will include the Goldring Centre for High Performance Sport

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The University of Toronto recognizes individuals who have had gifts made in their honour between May 1, 2006, and April 30, 2007.

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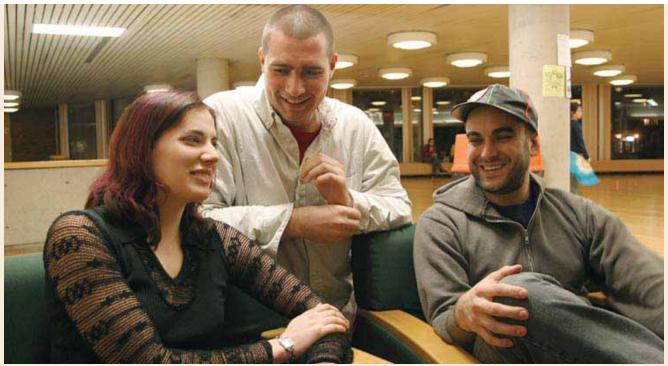
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Tiffany Warden, Stephen Carroll and Randall Reashore take Theoretical and Practical Approaches to Buddhist Psychology at New College.

Paula Menendez Lillian Messinger Catherine Murdina Mackenzie M Mills Ronald W Missen lames F. Moffat William I. Mollard lames Moore C. Eleanor Moorhouse-Genovese John Earl Moser Ray Mulrooney Peter A. Naglik Gurdev Kaur Neelam Donald G. Neelands Rehecca Newman Helen Norman Ruth J. Norton Freda Noyek Edward W. Nuffield Greg O'Brien

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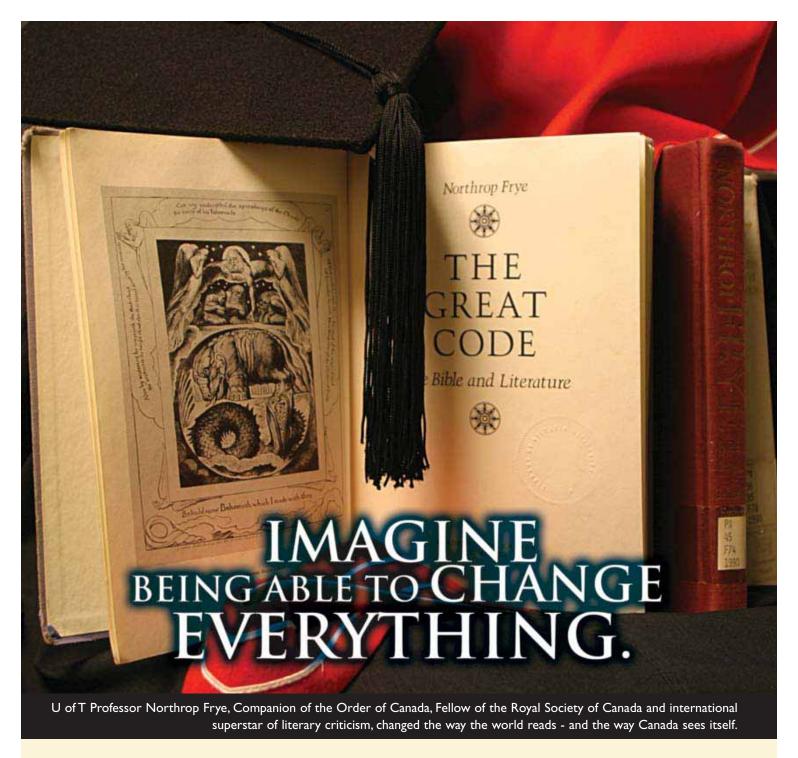
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# Great Gifts



# VARSITY TRACK NAMED FOR 1920s POLE VAULT CHAMP

Davenport Family Foundation gift honours John L. Davenport

he bright blue, eight-lane track at the new Varsity Centre now sports a name, thanks to the family of the late John L. Davenport, a 1929 chemical engineering grad and Varsity pole vault champion.

The Davenport Family Foundation has donated \$1.7 million to the Varsity Centre campaign, which aims to raise a total of \$70 million for the stadium and track, arena renovations and the Goldring Centre for High Performance Sport. John Davenport's son Peter says his father strived to get the most from his U of T experience. "Dad tried to do more than just the academic routine," says Peter. "If he were alive today and this opportunity came up, he would write a cheque instantly. It was that important to him."



John developed a successful athletic career while taking a full engineering course load. He won the Canadian pole vault championship in 1928 and the following year led the Varsity Blues to the coveted Intercollegiate Track Trophy.

"John Davenport's academic and athletic accomplishments are the ideal reflection of the philosophy behind the new Varsity Centre, which will contribute to the fullness of the student experience at U of T," says Bruce Kidd, dean of the Faculty of Physical Education and Health.

The Davenport Family Foundation has previously supported the John and Edna Davenport Chemical Research Building and the renovated Lash Miller Chemical Laboratories at U of T. - Althea Blackburn-Evans



# Tanenbaums Create Engineering Scholarships



April 1951, Joey Tanenbaum left first-year civil engineering to join his father's steel company. But his initial foray into the working world didn't last long. Tanenbaum returned to classes a year later – against his father's wishes – and went on to graduate second in his class, with a BASc, in 1955. He says going back to school was the smartest thing he's ever done.

Now, Tanenbaum and his wife, Toby, want to ensure a new generation of students can afford to attend university, and

have pledged \$1 million to establish the Joey and Toby Tanenbaum Admission Scholarships in the department of civil engineering. The gift will be matched in part by the faculty's Academic Excellence Fund to create a total endowment of \$1.5 million for scholarships.

Cristina Amon, dean of the Faculty of Applied Science and Engineering, said the new scholarships will help the department of civil engineering attract "exceptional students" who could become "the leaders of tomorrow and contribute to the technological innovation, economic development and prosperity of Canada."

The Tanenbaums are well known for their philanthropy: they have donated significant art collections to the Art Gallery of Ontario, the Art Gallery of Hamilton and the Royal Ontario Museum, and are also major supporters of the university. "You've got to give back to the community when you've done well," says Tanenbaum, whose grandparents left Poland with their two children in 1911. "I am a first-generation Canadian. We were brought up to give back to Canada and appreciate what this country has done for us." — Scott Anderson

# Donating BCE Shares Yields a Tax Benefit

usan Levesque (née Grimshaw), an investment adviser with National Bank Financial, has been counselling her clients for years about the financial benefits of donating stocks to charity. Earlier this year, the 1971 nursing graduate took her own advice, transferring 75 shares of BCE to U of T to support the Lawrence S. Bloomberg Faculty of Nursing.

Levesque's decision is timely because BCE shareholders have agreed to sell their shares to the Ontario Teachers Pension Plan for \$42.75 each. Shareholders will have no choice but to part with their BCE stock. By choosing to donate her shares to U of T instead of selling them, Levesque will not have to pay any tax on the capital gain she would have earned with the sale. In addition, she will receive a charitable receipt for the full value of her shares. "I've always pointed out the advantage of giving shares that have appreciated in value," she says. "If gifting is something my clients wish to do, then we always consider the possibility of stocks."

Even though Levesque hasn't worked in nursing for more than 25 years (she taught in U of T's department of preventive medicine in the mid-1970s), she keeps in touch with members of her graduating class. Last year, she hosted a 35<sup>th</sup> reunion lunch for about 30 women. "Nursing has always been near and dear to my heart," she says. — Scott Anderson

# Donor Supports "Helping" Disciplines

former professional oboist from the U.S. has created a financial award in honour of her late father to assist students in nursing, social work and rehabilitation therapy.

Nora Post, who has suffered from chronic, disabling pain for most of her adult life, says she wanted to do something for the people who have helped her cope with her condition for almost three decades. She decided to make a cash gift to create an endowment for the award and a bequest to supplement it in the future. "I'm helping the people who helped me," she says.

The Henry Albertson Van Zo Post Student Award, worth \$2,000, was given out for the first time last year, to first-year nursing student Amanda Keall.

Post earned two graduate degrees in music from New York University but never attended U of T. Like a growing number of American philanthropists, Post decided to donate to an institution where her money would make the greatest impact. "It was a practical decision, not an emotional one," she says. "For the same calibre of education, I could send six or seven people to school at

U of T for the amount I'd need to send one person to New York University." (Tuition fees at NYU are \$36,000.)

Post, who lives in upstate New York, did not choose Toronto out of the blue. She has visited the city several times and has some close friends at U of T. She says she "couldn't be more thrilled" to support a named scholarship here, and encourages others to explore the opportunity. "I am not a wealthy person. If someone like me can do this, it means there are an awful lot of other people who could do it as well."

— Scott Anderson

# History Professor Creates Holocaust Essay Prize

U of T professor who was awarded restitution for family property plundered by the Nazis during the Second World War has used the funds to create a prize for the best student essay on the Holocaust.

Jacques Kornberg, a professor emeritus of modern European history, received compensation from the Belgian government in 2006. The value of his family's property was unknown, but under Belgian law Kornberg was eligible for the standard compensation of \$34,000.

On the eve of the Second World War, Kornberg had left Belgium with his parents and sister. Decades later, he returned to uncover the details of his extended family's fate. In the Belgian government archives in Brussels, he discovered that his grandmother, uncles, aunts and cousins had all been deported to Auschwitz, where they were murdered in the gas chambers.

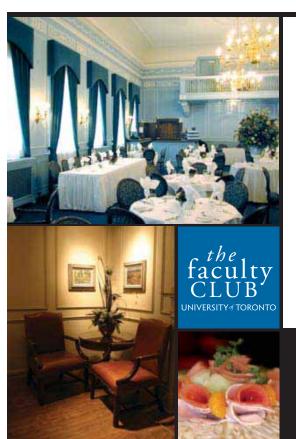
Kornberg, who has continued to teach Holocaust history since his retire-



ment in 1998, decided to use the money to create a prize for graduate or undergraduate essays on a Holocaust topic. "The restitution is no consolation for me, and clichés about perpetuating my family's memory are just soothing sentimentality," Kornberg says. "Yet, to give in to cynicism and nihilism is granting Hitler an added victory.

"Students have shown a strong interest in learning about genocide," he adds. "I felt, therefore, that an endowed essay prize that recognized academic excellence and moral concern was a way of maintaining hope for the future."

The Kornberg-Jerzierski Family Memorial Essay Prize in Holocaust Studies will be awarded for the first time in 2008. — Diana Kuprel



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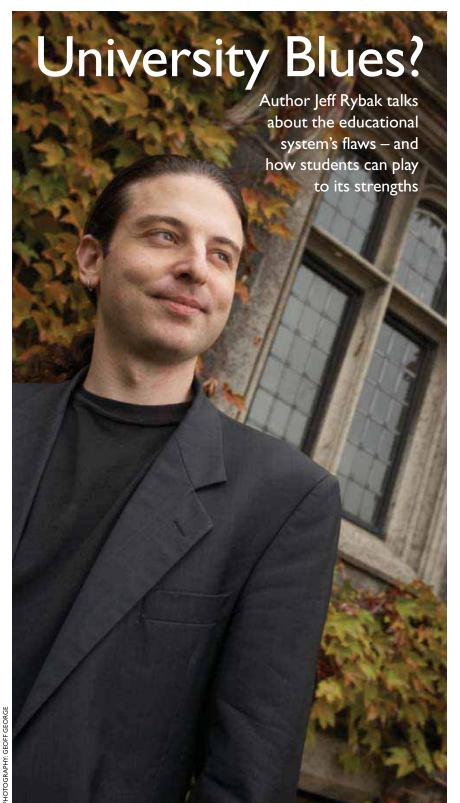


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# <u>Alumni</u> otes

PROFILES • NEWS • EVENTS • CALENDAR



eff Rybak, 31, is a graduate of the University of Toronto Scarborough and author of What's Wrong with University: And How to Make It Work for You Anyway. The guidebookcum-philosophical treatise examines the purpose of university education and gives practical advice to students on getting the most out of their schooling. Rybak, a former vicepresident, academics, on the Scarborough Campus Students' Union, is currently studying law at U of T. He talked to writer Graham E Scott about his book.

# Just what is wrong with university?

We don't tend to invite students to think about what they really came to university for. We act as though there's only one kind of education, and you come to get that, and then you're successful. And of course, it isn't that simple. You need a motive to get what you came for, and you need to realize that what you came for is not necessarily what the person beside you came for.

# That sounds more like a problem with students, not universities.

It's a problem with the way universities market themselves, and are presented by the government and society in general. We act as though this one place is the answer to everybody's success: if you want to study something because you love it, come here. If you want a career, come here. If you want to change society for the better, come here. If you just want to get away from your parents, come here. At some point, they convinced us that everybody needs this.

# Would you say that U of T is doing better, worse or about the same as other universities?

In my book, I'm not trying to name names. I think that U of T suffers from the big, research-based, monolithic university problem, where everybody gravitates to this one standard of excellence, to the detriment of other options. U of T is a good school, I just don't think it should be the one standard that everyone aspires to.

# Kudos

What should students do to get the most out of their time at university?

Take ownership of the experience. Sometimes you actually have to get up and say, "I want to participate." For one student that might be a writing circle, for another student that might be a job fair. If you just wait for what's handed to you, the odds are you're not going to get offered what you want.

# That sounds like students should be approaching the university as consumers looking for their money's worth. Is that a fair characterization?

I'd say approach university in a way that says you are determined to get value out of it and you are going to take the lead on making sure that happens. I'm not sure that's only a consumer perspective - you could say the same thing about church. You get as much out of it as you choose to put in.

# Why did you want to write this book?

Three years in student government. I was helping students with academic problems, and I was getting sick of saying the same things over and over. So I started to write things down, to help students understand things that I thought they'd benefit from. I wrote about 15,000 words, and a professor looked at it and said, "You know, you might have a book here."

# You started your undergraduate degree at 27. What were you doing in between high school and university?

Travelling. Writing - unsuccessfully. Working a number of minimum-wage jobs to support myself, and generally just living and growing up. Which brings me to my criticism of this whole "grow up at university" idea: life lessons are free. ... If you need some time to grow up, there's a whole world to do it in.

iochemist Bruce Alberts and public-health nurse Verna Huffman Splane received honorary degrees from U of T in November. Alberts, who served as president of the U.S. National Academy of Sciences, developed landmark national science education standards. He is a professor in the department of biochemistry and biophysics at the University of California, San Francisco, and cochair of the InterAcademy Council. Splane (CPHN 1939) has been a consultant to the World Health Organization and was appointed Canada's first principal nursing officer, the highest office accorded any nurse in the country. She is a lecturer at the University of British Columbia and University of Victoria.



Elizabeth Hay (BA 1973 VIC) was named the 2007 winner of the Scotiabank Giller Prize for her novel Late Nights on Air (McClelland & Stewart). The novel follows a cast of eccentric characters who work at a radio station in the Canadian North during the summer of 1975. The \$40,000 award is the largest annual prize for fiction in Canada.

Judith Pipher (BSc 1962 VIC) has been inducted into the National Women's Hall of Fame in Seneca Falls, New York, for her contributions to the field of infrared astronomy. Pipher is a professor emeritus of physics and astronomy at the University of Rochester. In 2003, NASA launched the Spitzer Space Telescope, which is equipped with infrared detectors that Pipher helped design.

Bernard Amadei (MASc 1979) is a co-recipient of the \$250,000 Heinz

Award for the Environment. Amadei is the founder of Engineers Without Borders - USA, a non-profit organization that helps improve the quality of life for people in poverty-stricken areas throughout the world.

# New Alumni Governors Elected

wo new alumni governors were recently elected to the University of Toronto's Governing Council, the 50member body that oversees the academic, business and student affairs of the university.

Larry Wasser (HBA 1978 Innis) is president of L.W. Capital Corporation, a private investment firm, and Entrepreneur-inResidence at the Joseph L. Rotman School of Management.

Stefan Larson graduated from U of T with a master's degree in science (molecular and medical genetics) in 1999, and also earned a PhD in biophysics at Stanford University. He is a consultant with McKinsey & Company, a global management consulting firm.

## **FESTIVAL**

March 3 to 20. **UofT First Annual Festival of the Arts 2008**. Creativity takes centre stage during this inaugural festival celebrating U of T's resident artistic talent. For three weeks, all three campuses will come alive with music, theatre, visual arts, dance, film and multimedia. Visit www.arts.utoronto.ca.

### **ALUMNI EVENTS**

Feb. 9. Berlin. **Berlinale 2008**. U of T alumni reception to coincide with the Berlin International Film Festival. University of Toronto in Berlin, WissenschaftsForum, Markgrafenstrasse 37. Contact Ira Rueckert at +49 0 30 2067 2712 or ira.rueckert@utoronto-berlin.org. In Toronto, contact Teo Salgado at (416) 978-2368 or teo.salgado @utoronto.ca. www.utoronto-berlin.org

Feb. 27. Toronto. **U of T Black Alumni Association Networking Event**. Contact
Sabrina Chang at (416) 978-5881 or sm.chang
@utoronto.ca.

Feb. 28. Atlanta, Georgia. Fourth Annual Pan-Canadian Alumni Gala. Canadians can network and socialize with fellow alumni. Guest speaker: Daniel J. Levitin, author of *This Is Your Brain on Music* and a psychology professor at McGill University. Tickets: US \$85. Four Seasons Hotel. Contact Christine Pappas at (404) 532-2030 or christine.pappas@international.gc.ca or Teo Salgado at (416) 978-2368 or teo.salgado@utoronto.ca.

March 29.Toronto. Love You Forever... and More Munsch. World première. The theatrical production is based on the stories of writer Robert Munsch. Recommended for families with children ages 4 to 8. Ice-cream party to follow. \$16. 2 p.m. Lorraine Kimsa Theatre for Young People, 165 Front St. E. Contact Sabrina Chang at (416) 978-5881 or sm.chang@utoronto.ca.

# **EXHIBITIONS**

# **Thomas Fisher Rare Book Library**

Jan. 28 to April 25. A Hundred Years of Philosophy from the Slater and Walsh

Collections. Monday to Friday, 9 a.m-5 p.m. 120 St. George St. (416) 978-5285 or www.library.utoronto.ca/fisher/exhibitions/current.html.

### **Uof T Art Centre**

Feb. 12 to March 15. **Cities: John Hartman**. John Hartman paints cities by combining his own memories of them with a collective understanding informed by factors such as politics, film and technology. Organized by the Tom Thomson Memorial Art Gallery. Tuesday to Friday, 12-5 p.m.; Saturday, 12-4 p.m. 15 King's College Circle. (416) 978-1838 or www.utoronto.ca/artcentre.

# **Doris McCarthy Gallery**

Jan. 16 to March 9. Paragons: New Abstraction from the Albright-Knox Gallery, curated by Louis Grachos. Tuesday to Friday, 10 a.m.-4 p.m.; Sunday, 12-5 p.m. 1265 Military Trail. (416) 287-7007, dmg@utsc. utoronto.ca or www.utsc.utoronto.ca/dmg.

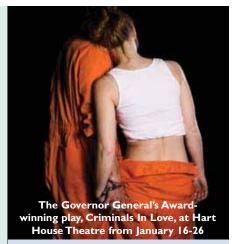
# The Eric Arthur Gallery

Jan. 14 to May 31. **ORD** documenting the definitive modern airport, curated by Charles Waldheim/Urban Agency. In the second half of the 20<sup>th</sup> century, Chicago's O'Hare International Airport was the biggest facility of its kind. ORD assembles photos of O'Hare by Robert Burley of Toronto and Hedrich Blessing of Chicago. Monday-Friday, 9 a.m.-5 p.m.; Saturday, 12-5 p.m. Faculty of Architecture, Landscape, and Design. 230 College St. (416) 978-5038, enquiry.ald@utoronto.ca

## **THEATRE**

### **Hart House Theatre**

Jan. 16 to 26. **Criminals in Love**. A Governor General's Award-winning play by George F.Walker.Two young lovers become intertwined in a two-bit criminal plan gone wrong. Tickets \$20 (\$12 for seniors/students). Wednesday to Saturday at 8 p.m. 2 p.m. matinée on Saturday, Jan. 26. 7 Hart House Circle. www.harthousetheatre.ca. For tickets, (416) 978-8849 or www.uofttix.ca.



Jan. 30 to Feb. 2. **U of T Drama Festival**. Four evenings of student-written, one-act plays from all three campuses. Tickets \$12 (\$10 for seniors/students). 7:30 p.m. 7 Hart House Circle. http://drama.sa.utoronto.ca/index.html. For tickets, (416) 978-8849 or www.uofttix.ca.

## **MUSIC**

Jan. 28 to Feb. 2. **New Music Festival**. Events include a Gryphon Trio concert, a composers' forum and a performance by Erika Raum with the U of T Symphony Orchestra. For a schedule, visit www.music. utoronto.ca and click on "New Music Festival." (416) 978-3744.

# **UTSC EVENTS**

Jan. 29. Reading by poet and fiction writer **Karen Solie**. 10 a.m., Bluff's, Student Centre.

Feb. 7. Reading by novelist and poet **Lien Chao**. 10 a.m., Bluff's, Student Centre.

For info, visit www.utsc.utoronto.ca.

## **UTM EVENTS**

Jan. 25. **UTM Winterlude**. Celebrate winter at the University of Toronto Mississauga.

Feb. 15. Networking Breakfast. Guest speaker: UTM alumnus **Nick Kuryluk**. Topic: Embracing Change Management in Your Organization.

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# The Bee and the Bicycle

Classic puzzles in arithmetic By Marcel Danesi

or many, the word *arithmetic* evokes memories of mechanical (and largely boring) tasks involving the addition, subtraction, multiplication and division of numbers. But mathematicians discovered long ago that a little mischief can enliven even the most routine of arithmetic operations. As Scottish poet Lord Byron once said: "I know that two and two make four and should be glad to prove it, too, if I could – though I must say if by any sort of process I could convert two and two into five it would give me much greater pleasure."

Some of the greatest mathematicians in history apparently took Byron's idea to heart. Highlighting the fact that fractions don't always produce neat results, the eminent Renaissance mathematician Niccolò Tartaglia came up with this classic puzzle in arithmetic wit:

A man dies, leaving 17 camels to be divided among his three heirs, in the proportions 1/2, 1/3, 1/9. How can this be done?

Dividing the camels in the manner decreed would entail splitting up a camel. This would, of course, kill it. Can you figure out what clever solution Tartaglia proposed?

Before Tartaglia, Leonardo Fibonacci (who devised the Fibonacci series) ventured into the domain of arithmetic cleverness in his famous book *Liber Abaci* (1202). In it, he posed ingenious conundrums involving basic counting and arithmetic. Here's one of them. (Be careful! The solution is not as straightforward as it appears.)

A snake is at the bottom of a 10-metre well. Each day it crawls up three metres and during the night slips back two metres. At this rate, when will the snake be able to slither out of the well?

Here, for the Byronian fun of it, are two other arithmetic puzzles:

A pencil and eraser together cost 55 cents. The pencil costs 50 cents more than the eraser. How much does the eraser cost?

A boy and girl are 20 kilometres apart. They begin cycling toward each other at a speed of 10 km/h. At the moment they begin cycling, a bee that had alighted on the girl's bicycle starts flying toward the boy at a constant speed of 15 km/h. As soon as the speedy bee reaches the boy, it turns and flies back toward the girl. It continues to fly back and forth until the boy and girl meet. How far does the bee travel?



Legend has it that the latter puzzle was posed to John von Neumann, the great Hungarian-born professor of mathematics at Princeton University, at a cocktail party. Von Neumann is said to have overlooked the simple answer in favour of a more complicated solution involving the summing of an infinite series.

4. Since the boy and girl cycle toward each other at 10 km/h, they meet halfway after travelling for one hour. Since the bee goes back and forth at 15 km/h, it will travel 15 kilometres in that time. It doesn't matter that the distance covered is between the cyclists.

**3.** The eraser costs 2.5 cents and the pencil costs 52.5 cents. This puzzle can be solved by letting the cost of the eraser = x and the cost of the pencil = 50 + x. We know x + (50 + x) = 55. Therefore 2x + 50 = 55, and 2x = 5.

**2.** On the eighth day, the snake begins its journey at the seven-metre level. During the day it climbs three metres, at which point it reaches the top of the well.

Answers

1. Tartaglia suggested borrowing an extra camel for the sake of mathematical argument. With 18 camels, one heir is given one half of 18, or nine camels; another heir ninth, or two camels. Divided this way, the total number of camels adds up to the original 17 (9 + 6 + 2). The extra of camels adds up to the original 17 (9 + 6 + 2). The extra camel could then be returned to its owner.

# **Campus** tories

# **Under the Roman Sun**

A reading week away from the books

In first year, my friend Aaron Young and I had enrolled in Prof. Eisenbichler's seminar on Michelangelo. Just a few days before reading week, when Aaron and I were out for coffee and a walk, he asked me if I'd like to go to Rome. He posed the question as if he were asking if I wanted another cup of coffee. I had no other plans, had never been to Italy and had no desire to bum around Upper Annesley for a whole week, so I answered with an enthusiastic yes.

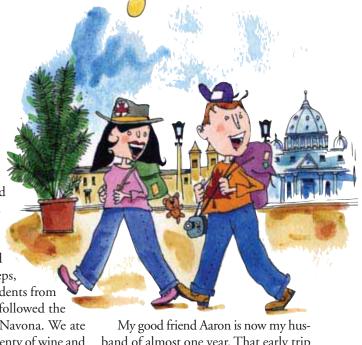
The following Friday we were walking under the warm Italian sun and seeing many of the sculptures and paintings we had been studying all term. We toured the Vatican and its museums, were blessed by the Pope and climbed to the top of the St.

Peter's dome. We spent hours at the Pantheon and walked the cobbled path from the Roman Forum to the Coliseum. We craned our necks at the Sistine Chapel and sat on the Spanish Steps, where we met other students from around the world. We followed the sun around the Piazza Navona. We ate delicious pasta, drank plenty of wine and tried every flavour of gelato imaginable. We stayed in Rome for most of the week, leaving the city only to visit Sardinia, where we dipped our feet into the crystal clear water of the Mediterranean and ate

local pastries filled with cheese and honey.

band of almost one year. That early trip to Italy sparked a passion for travel in both of us - and it sure beat studying slides in Pratt library!

> Kirstin Kennedy Young BA 2004 Victoria Toronto



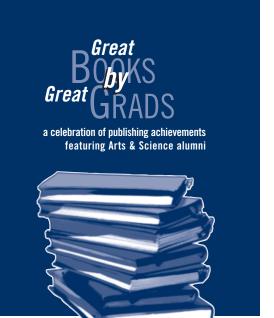
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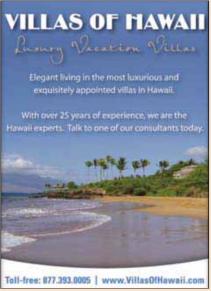
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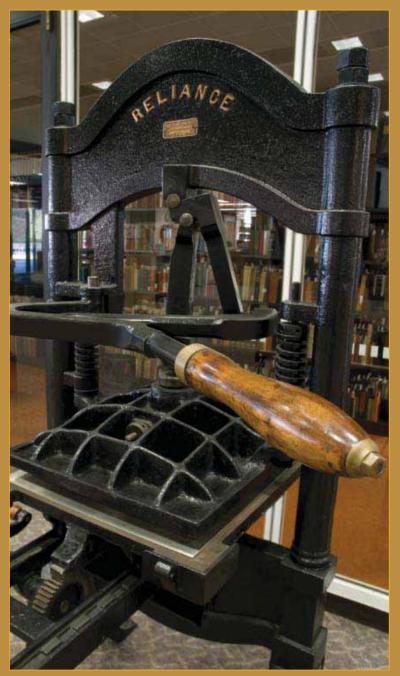
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# Meet the Press



"You want the students to get their hands dirty, quite literally," says Yannick Portebois, a Canada Research Chair in Book History who also teaches in the St. Michael's College **Book and Media Studies program. That's** why U of T is the proud owner of this 6,000pound, hand-operated flatbed Reliance printing press. The vintage device can be found in the John M. Kelly Library foyer. It is part of a collection of antique presses and other printing artifacts, which are housed in the St. Michael's Print Room on the library's second floor. The Reliance press allows students to actually put ink on paper, instead of just reading about the process. "It's wonderful to work with this machine," says Portebois, "because you feel the power of it."

Reliance presses were manufactured in Chicago between 1895 and 1911, and this particular one was previously owned by Don Black, a Toronto-area dealer and collector of vintage printing equipment. Over the course of the 20<sup>th</sup> century, as printing technology rapidly evolved, hundreds of presses of a similar vintage were simply dumped in Lake Ontario, making those that remain particularly valuable. Rarity isn't the only thing going for it, however – it's also a dream to work on. "It's humongous, but it is so smooth to operate," says Portebois. "This is machinery of high precision."

The students of the Book and Media Studies program are now starting to take orders for custom-made postcards, invitations, greeting cards and other small letterpress stationery items, and it looks like the Reliance press will be around to help them for years to come. "Listen, there's no way you can break this machine," says Portebois with a laugh. "It's pure iron."

HOTOGRAPHY: J. MICHAEL LAFOND



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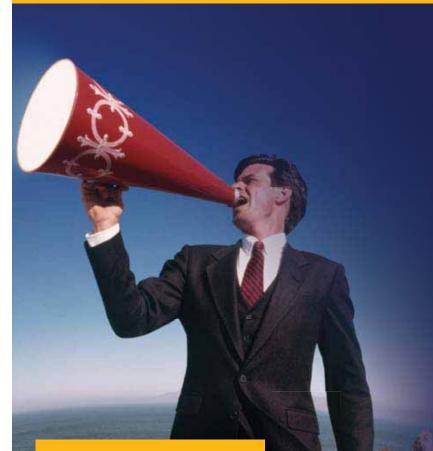
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