The York University Magazine

Summer 2017

How two York grads created a musical that's taken Broadway by storm

Flight Path

PLUS

Mamdouh Shoukri looks back
Head Bangers
Germ Warfare

The York University Magazine

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THE PRESIDENT

MAMDOUH SHOUKRI
PRESIDENT AND VICE-CHANCELLOR

IT TRULY HAS BEEN an honour to serve as president and vice-chancellor of York University over the past decade. I did not set out to be a university president – far from it. But as I reflect on my path from engineer to professor to university administrator, it does seem that all the various experiences were in some way preparation for the responsibilities of being president of this special place.

When one is preparing to complete a job like this, there are opportunities for reflection – on the work you have done, the challenges you have faced, the lessons you have learned and the remarkable people you have met along the way. So I find myself looking back not only on the past decade here at York, but also on the decades of dynamic change that higher education has seen while I have been a part of it.

Today, possibly more than ever, universities are urgently needed by society. Over the past quarter-century, the university has become a central player in a world increasingly being driven and shaped by knowledge and information and the growth and sharing of ideas.

Since our founding, York has been known not only for a unique interdisciplinary approach to teaching and research, but also for a commitment to social justice and to bettering our communities. We are proud of this heritage, and rightly so, but this defining feature of York needs to be nourished and protected. It has long been and must continue to be the role of universities to ensure these qualities are cultivated and become pillars of society and of societal progress. And York has a clear role to play in this.

While my hair has definitely become greyer during some of the more challenging moments over the past ten years, I have been a president who wanted to move York closer to its destiny – a future that has been planned since our first years as a university. Today, thanks to a number of events coming together – the subway, the Markham Centre campus, the opening of campuses in Hyderabad and Costa Rica, a new athletics stadium and a new Student Centre, the continued success of our graduates on the national and international stage, and world-class funding for vision science research (I could go on) – we are closer than ever to achieving the University's founding vision of academic and research excellence, local and global impact. We are poised to take an even greater role in the Canadian higher education landscape.

When I began my term, I saw a university with so much potential. Today, I am excited about the direction we are headed and the progress we have made. We continue to build on York's traditional areas of strength – in the humanities, social sciences, fine arts, business and law. But we have also grown in areas that match societal need: health care, engineering, applied science and research. I have no doubt that under the leadership of President-Designate Rhonda Lenton, York will continue to live up to its reputation as Canada's progressive university – a place with some of the most dedicated, innovative and creative people on the planet, in an environment that supports excellence, innovation and service to society. I know our community of incredible alumni, a key pillar of our success, will continue to engage and amplify our presence and impact in the world. Thank you all for a wonderful 10 years. I can't wait to see what's next.

PHOTOGRAPHY BY GARY BEECHY

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YORK UNIVERSITÉ UNIVERSITY

EDITOR'S NOTES

AS THE 2016-17 ACADEMIC YEAR DRAWS to a close (York's cherry trees have bloomed and gone, while the lilacs on campus are in their glory), the 2017-18 year approaches with the promise of new directions under a new president.

The biggest story in this issue is, of course, the change of leadership as Mamdouh Shoukri steps down from a 10-year stint as president and vice-chancellor. Taking over is longtime York faculty member, researcher and dean Rhonda Lenton, York's current vice-president academic and provost.

We include a Q-and-A with Shoukri (see "Stepping Out," page 15) in which he reflects on his time at York, including both the challenges he faced and the milestones he accomplished during his tenure – one being the building of a new architecturally award-winning building for York's engineering school.

Lenton, who will be York's eighth president, talks about her future visions for York's faculty, staff and students (see "Stepping In," page 12). *The York University Magazine* will include a more in-depth interview with Lenton in our fall issue.

Perhaps the second most noteworthy story this issue contains – at least from a York grad success story perspective – is about the resounding praise the musical *Come From Away* has received from North American audiences (see "Flight Path," page 20). Conceived and written by York grads David Hein and Irene Sankoff, it retells the story of the heart-warming reception airline passengers received in Gander, N.L., when their flights were diverted there because of 9/11. It is receiving rave reviews and has won a number of awards.

In our Noteworthy section, make sure to check out the story "Anchor of Change" (page 40) on York grad Ginella Massa and how she's changing the course of broadcast news in Canada.

– **MICHAEL TODD**

ON THE COVER
David Hein and Irene Sankoff
photographed by Mike Ford

View

OUTLOOK & IDEAS

Role Models

Behaviour of parents during infant vaccinations can have long-standing impacts

PHOTOGRAPHY BY MIKE FORD

A NEW STUDY OUT of York University's Opportunities to Understand Childhood Hurt (O.U.C.H.) Laboratory has found that more than 50 per cent of children are fearful and anxious before a needle or vaccination.

More than 200 Greater Toronto Area parents and children between the ages of four and five were involved in the study, which looked at what could predict preschool children's fear of needles. According to York psychology Professor Rebecca Pillai Riddell, this is an important time to examine fear because many childhood phobias begin around this age, and being afraid of needles during childhood can impact how much you seek medical care in the future.

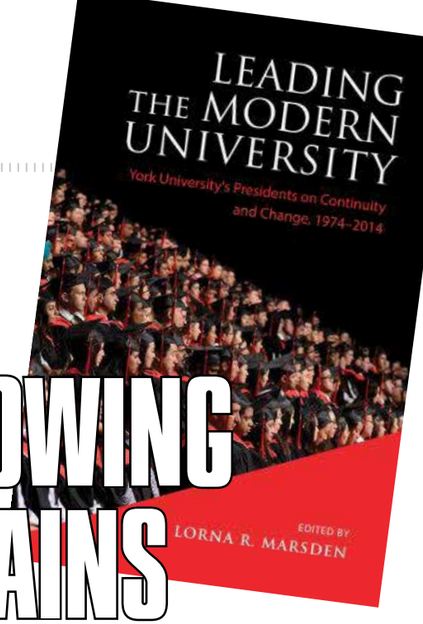
"We observed how these children behaved before their needles and after their needles when they were infants and preschoolers," says Pillai Riddell.

"We also observed how parents interacted with their children, and the types of things they said to their children during infancy and at the preschool age. We were interested in whether pain-responding and parent behaviour during infancy predicted needle fear at preschool."

Parents were surveyed about how scared they were before the needle, and how scared they thought their children were. As well, health-care professionals involved in the process were observed before the children received their needles.

Researchers not only found a very strong relationship between children's fear of needles before their preschool vaccination and their parents' behaviour at that time, but also found that parents' behaviour during infant vaccinations was predictive of preschool needle fear.

"Our research illustrates the importance of developing interventions to help parents support and coach their children during painful medical procedures from infancy onwards," says Pillai Riddell. Other researchers involved in the study included York Professor David Flora and lead author Nicole Racine. ●



GROWING PAINS

Former president's book charts York's struggle to find itself

FOUNDED IN 1959, the success of York University was far from guaranteed, especially during the early, tumultuous 1970s, writes former York president Lorna Marsden in her new book, Leading the Modern University (University of Toronto Press).

Marsden documents the challenges and solutions that five successive university presidents – H. Ian Macdonald, Harry Arthurs, Susan Mann, Marsden herself and Mamdouh Shoukri – encountered from the early '70s up until 2014. Interestingly, each president has contributed a chapter covering her or his own years in office in which they describe and analyze the challenges they faced regarding financing, morale crises and succession.

Leading the Modern University reveals that large public institutions often have internal dynamics and external forces that supersede any individual leader's years in office. This book is a case study for those interested in organizational change as seen through the leadership eyes of a major university during a dynamic period in higher education. ●

HEAD BANGERS

How concussion's neurological damage can linger undetected

PHOTOGRAPHY BY CHRIS ROBINSON

YOUNG, ELITE-LEVEL ATHLETES who have suffered a concussion may have lingering neurological consequences affecting their movement control, according to findings by researchers at York University's Centre for Vision Research.

While these athletes typically return to play after a few weeks, they may in fact have sustained neurological deficits that are not detected using standard clinical assessments, found lead researcher Lauren E. Sergio, a professor in York's School of Kinesiology & Health Science, and doctoral candidate Johanna Hurtubise. Their first study looking at National Hockey League draft prospects with a history of concussion showed that even in this top-performing group there is a small amount of impairment.

The researchers looked at the prolonged difficulty in cognitive-motor integration in 51 athletes who were asymptomatic and medically cleared of concussion. Their performance was compared with 51 athletes who had never suffered a concussion.

Participants in both groups were asked to perform two different tasks on a dual-touchscreen laptop. In one task, target location and motor action were aligned. In the other task, the required movement was not aligned with the guiding visual target and required simultaneous thinking for successful performance. The goal was to determine whether young, elite-level athletes with a history of concussion exhibited impairments. When the athletes had to think and move at the same time, the delay was approximately 50 milliseconds; Sergio says this could be the difference between getting hit on the ice or not.

"We expected their motor skill reserve to accommodate for their concussion history," she says. "We never suspected that this test would pick up a delayed reaction time the way it did when we used it previously on non-elite athletes. We propose that this type of testing (cognitive-motor integration or CMI) is useful as a return-to-play assessment."

Sergio adds that standard tests used today only look at cognitive and motor tasks separately and don't combine the two, which could explain why the athletes passed current tests.

"To be successful in many sports, a player must apply a wide range of cognitive factors to each of their movements within the game," says Sergio. "In hockey, an example would be passing to one's teammate on the left while looking and attempting to avoid a body check from an opponent on one's right."

Sergio says these results suggest current return-to-play assessments – in which thinking and moving are tested separately – don't fully capture the functional disability of a concussion. She says more research focusing on their integration is needed. ●

Raise a Glass

Here's to a local invention with a global impact

PHOTOGRAPHY BY SOFIE KIRK

SUSHANTA MITRA:
Bringing safe water to the world

IF THE RESIDENTS of Walkerton, Ont., had an instrument that could easily detect E. coli contamination for little cost – like the Mobile Water Kit developed recently by researchers at York University – they might have avoided the tragedy in May 2000 that left 2,300 people sick and seven dead.

This remarkable invention has cut down the time it takes to detect E. coli from a few days to just a few hours – even less time in warmer climates like India's. According to the developers, who include Lassonde School of Engineering Professor Sushanta Mitra, it is also an inexpensive way to test any drinking water (estimated C$3 per test), which is a boon for many developing countries and for remote areas of Canada's North.

"We have developed a hand-held, hydrogel-based rapid E. coli detection system that will turn red when E. coli is present," says Mitra, associate vice-president of research and Kaneff Professor in Micro and Nanotechnology for Social Innovation at York. "It can detect the bacteria right at the water source, before people start drinking contaminated water."

This potable water quality monitoring device is not only inexpensive, it is also very small – a 5- to 100-millilitre plunger tube weighing just a few grams.

"It is a significant improvement over an earlier version of the Mobile Water Kit that required more steps, handling of liquid chemicals and so on," says Mitra "This version is so uncomplicated that even an untrained person can use it."

The breakthrough invention has resulted in the formation of Glacierclean Technologies Inc., an Innovation York spinoff company, in partnership with York University.

"Currently, there are approximately 48 drinking water advisories in First Nations communities in Ontario and 136 in a further 95 First Nations communities nationwide," says Mitra. "Devices like our mobile water test kit empower individual users and communities alike by providing choices about clean drinking water." ●

1

2

3

SAFETY FIRST:

1. Water samples collected from slums in Noida and New Delhi, India
2. Mobile Water Kit used in field trials
3. MNT Lab group member Dr. Naga Siva Kumar Gunda performing water quality testing

Stepping In

Rhonda Lenton chosen as York University's eighth president and vice-chancellor

BY ROD THORNTON
PHOTOGRAPHY BY MIKE FORD

AFTER A YEAR-LONG SEARCH, York University has chosen Vice-President Academic and Provost Rhonda Lenton to become its new president and vice-chancellor, succeeding Mamdouh Shoukri, who will be retiring this summer after 10 years in the role.

"I am honoured and excited about this opportunity," says Lenton. "I am deeply committed to York's values and its vision as Canada's leading engaged university, providing a diverse student population access to a high-quality, research-intensive institution. York is poised for strengthening its already consequential impact, both locally and globally; tremendous opportunities await us – from the best students, faculty, staff and alumni, our new Markham Centre campus and leveraging recent major research successes."

Lenton, who will become the University's eighth president, says she believes York's planning documents set out a path that will enhance program quality, student success and community outreach and partnership. "We will achieve our goals by building on well-established programs in the liberal arts and professional studies, while continuing to expand newly emerging strengths in health and STEM areas, and intensifying our leadership in interdisciplinary and transdisciplinary academic programs and scholarship," she says.

Some of her main goals, once president, include fostering a sense of connectedness among York's faculty, staff and students; enriching the faculty complement; and expanding outreach and partnerships to enhance experiential learning opportunities, as well as collaborative scholarship, research, and creative activities contributing to the economic, social and cultural well-being of Ontario and beyond.

Like many at York, Lenton is a first-generation university student. Before moving into administration, she was a highly respected sociologist – she taught, researched, and published broadly in the areas of family violence, feminist movements in academia, Internet dating and, more recently, higher education. She has served as York's vice-president academic and provost since 2012. Previously, she served as dean of the Faculty of Liberal Arts & Professional Studies, and vice-provost academic.

Shoukri praises the Board of Governors' choice: "I know that the future of York University is in excellent hands. Rhonda is a proven leader and someone who will continue to champion York's commitment to achieving the highest levels of excellence as a leading comprehensive university with incredible learning opportunities for our students."

Lenton will begin her five-year term on July 1.

The York University Magazine will include a feature story on President-Designate Lenton in our Fall 2017 issue. ●

Stepping Out

Mamdouh Shoukri looks back on a decade as York University's president and vice-chancellor

PHOTOGRAPHY BY MIKE FORD

MAMDOUH SHOUKRI became York University's seventh president and vice-chancellor on July 1, 2007. He ends his second-term as president on June 30. During his time in the role, Shoukri was a member of the Board of Governors, an ex officio member of all board committees, a member of the York University Senate and an ex officio member of all Senate committees. Shoukri came to York from McMaster University, where he had been vice-president research and international affairs since 2001. For his contributions to the flourishing of Ontario's academic institutions, as both an engineer and an administrator, he was named a member of the Order of Canada and the Order of Ontario in 2013, and awarded the Queen Elizabeth II Diamond Jubilee Medal. He is a Senior Fellow of Massey College, and a Fellow of the Canadian Academy of Engineering and the Canadian Society for Mechanical Engineering. *The York University Magazine* spoke with President Shoukri recently about how York has evolved during his 10-year tenure, and what the next 10 years might bring for the University.

THE MAGAZINE: Why were you interested in becoming president of York University 10 years ago?

SHOUKRI: I knew that York had a very strong academic and research presence in many areas of knowledge. I believed there was a clear strategic direction for York to become more comprehensive and more research intensive. My sense was that the University's size helped to give it credibility and would enable us to build the remaining parts on solid ground. I knew that York was in a location that was projected to grow and evolve in terms of population, economic activities and so on. I was also drawn to York's commitment to social justice and social values as a progressive university, and this is very much aligned with my own values. So when I considered all these things together, I thought it was a good fit on both a professional and a personal level.

I think you need to advocate a vision and you work with your colleagues on bringing that vision to life

THE MAGAZINE: Would you agree that York is a very different place now than when you arrived 10 years ago?

SHOUKRI: Yes, York is very different now than it was 10 years ago. There's no question that all indicators suggest we are a major player in postsecondary education in Canada and North America. I think there is much wider recognition of York's research strengths, our increased comprehensiveness, increased infrastructure and the resulting improvement in York's academic excellence and student life over the past decade.

We continue to build a strong culture of academic planning – integrated academic planning. This is something I am very proud of, and it is clear that we are far more comprehensive than we were before, with significant growth in engineering, health and life sciences. Early on, creating infrastructure for the life sciences was very important to me. And one can see the results of that in the Life Sciences Building. The establishment of an engineering school is, of course, a very obvious landmark, with the school now housed in the award-winning Bergeron Centre for Engineering Excellence. Many of the services that are available to students have grown significantly as well. I'm particularly excited about the new student centre and major addition to the Schulich School of Business, both now under construction.

The positive results of our research intensification efforts are very evident when you consider the results of the recent CFREF (Canada First Research Excellence Fund) competition. In the past, York had never been included in federal research competitions of that size and stature, where a research program is recognized as the best in Canada and with that support can then become the best in the world. In 2016, our vision research group succeeded in securing one of these grants, and this is due to their strength and also because of the infrastructure we created to support the capacity of the University to bring together an application of that size.

THE MAGAZINE: What role did you have in shaping or enabling all of that?

SHOUKRI: There's no question in my mind that the president creates the vision and sets the tone. I think one of my major contributions was to continue to drive for more integrated academic planning – for the aligning of finances and budgetary expenditures in clear ways to support our academic plans. Doing so helped to shape and enable the vision of becoming a more comprehensive and more research-intensive university.

The other thing I think I was responsible for doing was putting together a leadership team that has done an incredible job over the past 10 years of moving York forward. You can have all the ideas you want, good or bad, but getting them done and done right requires having the right bright and capable people around you, who first buy into your vision and then are willing to do what it takes to make it happen.

THE MAGAZINE: You say a large part of your role is creating a work environment that makes things happen. How did you do that?

SHOUKRI: Well, as I said earlier, I think you need to advocate a vision and you work with your colleagues on bringing that vision to life. I can't say enough about the two most senior vice-presidents we have had here during the last five years or so, who helped me make that happen and accelerate the University's development, Rhonda Lenton and Gary Brewer. In fact, one of the things I knew I wanted to do when I became president was to create a new position – of the provost. I felt strongly that this position was an important element in creating an integrated academic plan for the entire university, giving the chief academic the opportunity and the power and authority to align budgetary expenditures with academic priorities. And I think that worked very well, particularly when you have people in that position of the calibre of Rhonda Lenton and, before her, Patrick Monahan.

THE MAGAZINE: How did you balance all the factors when running the day-to-day life of the University?

SHOUKRI: University presidents for a long time have had to balance so many factors. There are governments, the external community and the media. There are faculty and staff, alumni and trade unions. But, for me, I start from one important point. First of all, why are we here? We are here for the students. We are here – and this is very clear in my mind – to prepare the next generation of world citizens.

Protecting academic freedom and freedom of speech, and trying to create the environment that allows for that, is very important

With the complexity of the world, it is not difficult to forget, but in my mind there are very clear reasons we're here. There are clear principles underlying whatever decisions we need to make in order to balance all of these factors, so that whatever we do is driven by and is protective of these principles. We are here for the students. We are here to create knowledge, preserve knowledge and disseminate knowledge. We have to make sure that we are promoting research, and that we are creating the right environment for discovery and innovation.

The other thing, particularly these days and, I think, throughout the history of universities, is that universities are incredible forums for the exchange of ideas. Therefore, protecting academic freedom and freedom of speech, and trying to create the environment that allows for that, is very important. The other thing to remember is how universities are governed. Universities are created by legislation and governed by two bodies, the Senate and the Board of Governors. Each of these oversight bodies has distinct characteristics, and the administration sits between them. So part of the major balancing act of running the day-to-day life of the University is to make sure that your relationship with those two bodies is balanced. And, as president, you are almost a guardian of the relationship between those bodies – one which is responsible for academic decisions and the other which is responsible for all the other aspects of the University's health, financial and otherwise.

THE MAGAZINE: What about the other groups, like donors and alumni? What part do they play in the University's well-being?

SHOUKRI: Let me start with alumni. I can't tell you how proud our alumni are of their experience at York. And I think that's something we need to recognize more. So, over the years, I have made it a point to reach out to alumni whenever I could. I have met York alumni who are working in every field of human endeavour, and I couldn't be prouder of seeing not only their achievements, but also their sense of loyalty to York.

Donors are also very important to the University. They are important because of the investment they make, but let's be very clear: The investment they make is very important but, perhaps more importantly, donors are people of influence in society who partner with the University and can be its strongest advocates. These are individuals who put a significant amount of their wealth in the University, so they are often your best ambassadors because of their belief and investment in York.

That said, you have to ensure that decisions associated with the investment of those funds do not affect academic freedom. In my time at York, we never raised or accepted donations that did not directly support our academic priorities. And that is why one of the things I did was bring the fundraising function inside the University to involve the deans and others to ensure our fundraising activities were aligned with and supported our strategic objectives.

THE MAGAZINE: Over the past 10 years, do you think there has been a shift in public perceptions about and interest in York University?

SHOUKRI: Yes, I do. There are a number of things that have happened over the past 10 years that I think have contributed to improving York's institutional reputation. First of all, I'm very proud of the development of a culture of integrated planning at York. But how much of that does the world see? The answer is that they don't see it. But they are starting to see the results of that – the CFREF grant I mentioned earlier is one example, but there are others. When 13 universities in Ontario submitted proposals to create a new campus in the province, the government chose York and our Markham Centre campus proposal.

This reflects the incredible credibility and strength of York, and people take note of that. We have also begun to invest in enhancing York's reputation with a strategic marketing and communications program, including advertising, and this is making an impact in terms of changing perceptions of York with prospective students, their parents and the public at large. And when you see that the increase in first-choice applications for universities is just over one per cent in

Given the positive trajectory York is on, I don't think you need a crystal ball to see the future

Ontario, but the increase for York in the latest data is six per cent, this tells you there is something very positive happening at York.

We also now have more programs in areas of science, engineering and health, and new campuses in Costa Rica, and Hyderabad, India. And the fact that the subway is coming to York later this year is also resonating very positively with people.

THE MAGAZINE: Where do you think York will be 10 or 20 years from now?

SHOUKRI: Given the positive trajectory York is on, I don't think you need a crystal ball to see the future. I think that in the next decade or so, York will be one of the leading research-intensive, comprehensive universities in the country. It will have stronger community reach and much stronger global reach. I have no doubt about that. I believe York, in 10, 20 years, will continue – because of the incredible strength we have in the humanities, social sciences and the arts, as well as our heritage – to be a university with clear, strong commitment to social innovation and issues of social justice.

We are, as I said earlier, in the right area. There will be growth in demand for postsecondary education in this area. There will be more growth for York's research output, not only in the sciences and health, but also in the humanities and social sciences. I think the arrival of the subway will do many things for us. It will connect us with the centre of the city, and as much as it would allow us to reach out to those living and working there, it would allow them to reach out to us as well. And that will also bring attention of the north. York Region is the natural place for York University's activities, and the subway will help to connect us to the north and the Markham campus.

I also hope that York will never lose the character of being a progressive university, where ideas are debated and where everyone has the right to speak, and a place for continuing debate and discussion. York's historic strength is a commitment to social responsibility, and I hope we will continue to be a beacon for issues like freedom of expression and the rights of minorities and of equity more broadly defined. We need to continue to create an environment that will fight against the high levels of polarization we have been seeing evolving both locally and globally. And I think universities like York are equipped not only to be part of that fight, but to help shape and define it.

THE MAGAZINE: Let's talk about Glendon College. It's an important part of York's character.

SHOUKRI: York has been a strong – through Glendon – advocate of bilingual education. Glendon offers the only university degrees in both official languages in southwestern Ontario. And because of our lobbying efforts and our strong commitment to bilingual and French education, we have managed to secure the funds to build the Centre of Excellence. We are investing in expanding the programming offered by Glendon to include new programs in science, business and psychology, among others. So I see Glendon as a very important, defining characteristic of what York is all about. I can't say enough about the incredible work the current Principal of Glendon, Donald Ipperciel, has been doing. He brought with him a new spirit to move Glendon forward as an integral part of the York community and as our flagship for bilingual education in this region of Ontario. And so, I see a great future for Glendon.

THE MAGAZINE: What were some of the highlights of our fundraising campaigns?

SHOUKRI: During my term as president, there have been some memorable moments when it comes to fundraising. For example, when we wanted to build the new engineering school and reached out to government, it became very clear that government funding would not be enough. So we needed to raise money to ensure the school could be built, and we were very fortunate.

I reached out to Seymour Schulich and because of his own long-term commitment to York, and because he was convinced of the importance of the project, he introduced me to his partner, Pierre Lassonde. And it was Pierre who invested $25 million to help establish our school of engineering.

Another recent example is the $20-million gift from our own graduate Victor Dahdaleh to establish our institute for global health. In both cases, because of our clear academic plans, when we reached out to them, we had projects and opportunities which reflected exactly what they wanted to support and what we needed to do academically.

THE MAGAZINE: What's the most important piece of advice you would give to your successor?

SHOUKRI: I think Rhonda Lenton has the knowledge, the determination and the personality that will allow her to reach out to people and continue to build bridges to take this university to the next level. In fact, I think she will take it far beyond that. So my only advice to her is to stay the course and continue reaching out to people. I look forward to watching her success as she leads the University forward in the coming years. ●

Flight Path

After a turbulent journey,
two York grads touch down in the Big Apple
with their small-town musical

BY LINDSAY MACADAM **PHOTOGRAPHY BY MIKE FORD**

Where were you when the world stopped at exactly 8:46am on Sept. 11, 2001?

I WAS IN TWELFTH GRADE law class when my school principal's voice boomed over the PA system to let us know the unthinkable had happened – that life as we knew it had suddenly changed forever. We carried on about our day, but I distinctly recall walking home that afternoon and looking up at the sky in disbelief, wondering if we would ever feel safe again.

York University graduates David Hein (BFA '97) and Irene Sankoff (BA '99) were in their New York City apartment that morning, in a residence for international graduate students in Upper Manhattan. Hein was working for a company on Los Angeles time and Sankoff, who was doing her master's at the Actors Studio Drama School, didn't have class until 11am, so they were both home when the phone rang. It was Sankoff's father telling them to stay where they were, and to turn on the television. When she tried to call him back a few minutes later, after seeing the news coverage of planes flying into the World Trade Center's twin towers, the phone lines were jammed.

The pair spent the rest of that day surrounded by their neighbours, fellow students from more than 100 countries. They comforted each other while waiting anxiously for those they knew to return safely from their downtown offices, the smoke in the air serving as a constant reminder of the incomprehensible destruction across town. The musicians of the group took to the piano to lift the mood. "There was something very healing about the music that helped us come together as a community," says Hein. "Everyone needed that community. They needed to be in a room with other people."

If you were lucky enough to catch a showing of the hit musical *Come From Away*, co-written by Hein and Sankoff, when it smashed box office records in Toronto last fall, that scene should sound familiar – a diverse group of relative strangers forced together during an unimaginable crisis, making the most of a devastating situation by sharing stories and coping through song. Those similarities are precisely what piqued Hein and Sankoff's interest when theatre producer Michael Rubinoff suggested they consider creating a show about what happened in the immediate aftermath of 9/11, when 38 planes were grounded in the small town of Gander, N.L.

The couple insists their musical isn't about 9/11, though; it's about 9/12. "It's about how this small town responded to this larger event," says Hein. "But beyond that, it's about that feeling we all had internationally that we were going through something together."

In the 100-minute show, the 12-member ensemble cast – each playing multiple roles, with multiple accents – tells the stories of the 7,000 "plane people" who found themselves stranded in Gander for five days, and the 9,000 generous locals who dropped everything to welcome them with open arms, shots of Screech and generous helpings of cod au gratin. "They had every right to either not take the planes or just say, 'You're allowed into the airport and that's it,' " says Sankoff. "But that is not what they did. Not only did they take them into their community buildings as they shut down operations for a week, but they also took them into their homes and entertained them and fed them and washed their clothes."

With a minimalistic approach to set design, props and costumes, this show is instead carried by its authenticity, lighthearted humour (no mean-spirited Newfie jokes here) and foot-stomping East Coast tunes – which, by the way, were also written by Hein and Sankoff, and brought to life by the eight-piece band. To make sure they nailed the music, they brought on Bob Hallett, a hero of Hein's from the popular Newfoundland group Great Big Sea, as their music consultant. "It was a thrill to have him on board and get his stamp of approval," says Hein.

Creating a hit Broadway musical wasn't Hein and Sankoff's plan all along, if that's what you're thinking. "It's a real dream come true, but at the same time it's a dream we never really had – openly," says Hein. In fact, it took years of trial and error, countless professional detours, long days and big risks to end up where they did.

That journey began when the pair met on their very first day of Orientation Week at York, both entering the theatre program and moving into Winters College. Hein, an aspiring singer-songwriter originally from Regina, majored in lighting and set design. Sankoff, a musical theatre aficionado from the Toronto suburb of North York, initially majored in acting but later switched to psychology and creative writing. The two soon connected over their love of the arts, and have been together ever since.

In their first year at York, they had the opportunity to try out nearly every aspect of theatre production, from acting and writing to costume-making, set design and hanging lights – skills that would later set them apart and prove to be invaluable.

After Sankoff graduated from York in 1999, she moved to New York City to study acting. Hein followed, taking on odd jobs, including one at a music studio where "The Muppets" was recorded.

One month after 9/11, on Oct. 12, 2001, the couple spontaneously eloped at City Hall, just a few blocks from Ground Zero. They had been engaged for more than a year at that point and, given all that had recently happened, they decided this was as good a time as any. "There was a real feeling in New York of just living for the present," says Hein, "so we said, 'Why are we waiting?' … It was a very intense day of love, but set against the backdrop of this terrible tragedy, which is sort of what our show is."

The pair didn't realize they worked so well together until many years later, after Sankoff suffered a dance injury in 2007 and her inadequate U.S. health insurance, coupled with the company David was working for shutting its doors, meant they needed to make the move back to Toronto. They were both working various days jobs – Hein at an insurance company and Sankoff as a teacher – and pursuing their artistic passions in the evenings, leaving them no time for each other. They were burned out and desperate for change, so in 2009, they decided to write a show together.

That decision resulted in the musical comedy *My Mother's Jewish Lesbian Wiccan Wedding*, based on the true story of Hein's mother. It debuted at the 2009 Toronto Fringe Festival, where it caught the attention of David Mirvish and eventually toured all over North America. The show was such a success that Hein and Sankoff had to quit their day jobs, which in turn gave them the drive to write something else.

When Rubinoff approached the couple in 2011 about the story in Gander, the timing couldn't have been better. They discovered after some preliminary research that the town would be hosting a commemoration ceremony on the 10th anniversary of 9/11, and all the passengers, flight attendants and pilots would be returning. That's when Hein and Sankoff applied for the Canada Council for the Arts grant that allowed them to stay in Newfoundland for almost a month to hear the riveting stories that would end up inspiring their entire show.

THERE WAS SOMETHING VERY HEALING ABOUT THE MUSIC THAT HELPED US COME TOGETHER AS A COMMUNITY. EVERYONE NEEDED THAT COMMUNITY. THEY NEEDED TO BE IN A ROOM WITH OTHER PEOPLE

It was the first time they had ever been to "The Rock," a place they now consider a second home. "We fell in love with the place, we fell in love with the people and we saw first-hand the generosities that the 'come from aways' saw 10 years earlier," says Hein.

SAFE LANDINGS:
The cast of *Come From Away* during the musical's Toronto run (top left and bottom); Kendra Kassebaum sings (top right)

STAGE PHOTOGRAPHY BY MATTHEW MURPHY; IMAGES COURTESY OF MIRVISH PRODUCTIONS

When asked what it was about the people in Newfoundland that solidified their decision to create the musical, Sankoff says, "They're charming people. They're wonderful storytellers."

"They take care of you while they're telling a story," interjects Hein. "They'll see you starting to well up from some heartbreaking thing and immediately they'll tell you a joke to turn it around and make you laugh. We tried to convey that in our show."

The hundreds of hours of interviews they conducted on that trip – about loss, love, generosity and acceptance – are reflected in every line, joke and song in this heartwarming work. *Come From Away* might be referencing a distinct moment in time, but it's a story that has resonated from coast to coast because of its universality and its raw depiction of the human condition. It also may be that in this present time of political turmoil and global unrest, people are finding comfort in the underlying message of hope – that kindness still exists, and that in the face of evil, people will ultimately take care of one another.

NOT ONLY DID THEY TAKE THEM INTO THEIR COMMUNITY BUILDINGS AS THEY SHUT DOWN OPERATIONS FOR A WEEK, BUT THEY ALSO TOOK THEM INTO THEIR HOMES AND ENTERTAINED THEM AND FED THEM AND WASHED THEIR CLOTHES

Despite what the recent buzz might lead you to believe, this isn't a brand new production at all; it has been testing the waters across North America for six years. Starting in 2011 at Sheridan College's Canadian Music Theatre Project, an incubator for new Canadian musicals, it then moved onto two musical-theatre festivals in the U.S., followed by stints in San Diego, Seattle and Washington, D.C., where it was performed for survivors of the 9/11 Pentagon attack. The show then returned to its roots in Gander for two benefit concerts, broke records at its homecoming in Toronto and finally touched down on Broadway this spring at the 1,080-seat Gerald Schoenfeld Theatre.

"Taking it back to Gander was the pinnacle of everything we could have dreamed of," says Hein, "sharing it with the people who shared their stories with us, and doing it at a benefit concert where all the proceeds went to local charities."

As Hein recalls, the audience of 5,000 that filled Gander's hockey-arena-turned-theatre started clapping mid-opening number. Then, 10 minutes before the show ended, they again erupted into applause that didn't cease until after the curtains closed. "It was overwhelming and so wonderful to know we got it right," he says, "which was sort of our goal the entire time."

Bringing the production back to Toronto was another major milestone for the husband-and-wife team. It's where they went to school, where they first met and where they started writing the musical. The Royal Alexandra Theatre, where it ran from November 2016 through February 2017, holds special significance for Sankoff, who has fond childhood memories of getting rush tickets with her mother for the nosebleed seats at the back.

In March, *Come From Away* officially opened in New York and became the fifth Canadian-written musical in history to land on Broadway. It has since been met with standing ovations every night, rave reviews from influential critics, seven Tony Award nominations and – just recently – one win. On June 11, the show's director, Christopher Ashley, accepted the Tony for best direction of a musical "on behalf of the people of Newfoundland and all of the first responders and their families in New York on 9/11."

The hard-to-please *New York Times* called *Come From Away* "a big bearhug of a musical" and declared it a critic's pick, the *Washington Post* called it "an antidote for what ails the American soul" and the *New York Post* insisted it's "Broadway's biggest and best surprise of the season."

Big-name Canadians have been equally impressed. Singer-songwriter Jann Arden Tweeted back in December that it was the best musical she had ever seen, a sentiment that was mimicked by Calgary Mayor Naheed Nenshi. And actions speak louder than words for Prime Minister Justin Trudeau, who admitted to the cast that he cried through the entire show when he saw it on Broadway in March. Luckily for us north of the border, Mirvish Productions recently announced the show will be returning to Toronto in January 2018 for an unlimited engagement, based on public demand.

Despite the early success indicators of this Tony Award winner's Broadway run, Hein and Sankoff are remaining cautiously optimistic, acknowledging that the odds are stacked against them. Maybe it's the post-9/11 mindset that sent them impulsively to the altar all those years ago that still prevails, reminding them to live in the moment and enjoy the ride. ●

JENNIFER KUK:
Explaining our weight gain

Lean Times

Why was it easier to be skinny in the 1980s?

BY MICHAEL TODD
PHOTOGRAPHY BY HORST HERGET

HERE ARE SOME WEIGHTY FACTS: In Canada, half of the provinces will have more overweight adults than those of normal weight by 2019; worldwide, the prevalence of obesity has more than doubled since 1980, rapidly advancing in unexpected places like China, India and North Africa.

And now it seems staying slim and trim is harder than ever. York University researchers have discovered that those with the same calorie intake and physical activity levels had an average body mass index of 2.3 kilograms per square metre higher in 2006 than in 1988.

The study, conducted by Professor Jennifer Kuk in York's School of Kinesiology & Health Science, and her colleague Ruth Brown, lead researcher and York graduate student, analyzed dietary data of nearly 36,400 American adults collected by the National Health & Nutrition Survey between 1971 and 2008. The available physical activity frequency data of 14,419 adults in the 1988 to 2006 period was also used.

Although the average food and energy intake around the world has increased over the past few decades, it's not the only reason for weight gain. The belief that weight gain is simply the result of people consuming more calories than they burn is now being questioned by researchers.

Weight management is much more complex than simply "energy in" versus "energy out," says Kuk, the study's senior author.

"Saying the above is true is similar to saying your investment account balance is simply your deposits subtracting your withdrawals, and not accounting for all the other things that affect your balance – like stock market fluctuations, bank fees or currency exchange rates," she says.

"Our study results suggest that if you are 40 years old now, you'd have to eat even less and exercise more than if you were a 40-year-old in 1971 to prevent gaining weight. However, it also indicates there may be other specific changes contributing to the rise in obesity beyond just diet and exercise."

The York study reports that people consuming a given number of calories were 10 per cent heavier in 2008 than in 1971, and about five per cent heavier for a given amount of physical activity in 2006 than in 1988.

"These secular changes may in part explain why we have seen the dramatic rise in obesity," says Brown.

Kuk says our body weight is affected by our lifestyle and environment, including medication use, genetics, timing of food intake, stress, gut bacteria and even nighttime light exposure.

In an article in a recent issue of *The Atlantic* about her research findings, Kuk proffers that people today are exposed to more chemicals that might increase weight gain. She suggests that pesticides, flame retardants and even substances found in food packaging could be altering our hormonal processes and, in turn, the ways our bodies gain and maintain weight.

Second, she mentions the use of prescription drugs has risen dramatically since the 1970s and '80s, some of which have been linked to weight gain.

If you are 40 years old now, you'd have to eat even less and exercise more than if you were a 40-year-old in 1971 to prevent gaining weight

Finally, Kuk and other experts think the gut microbiomes of North Americans may have changed between the 1980s and now. It's now known that some types of bacteria can make a person more prone to weight gain and obesity, she says. Antibiotics may also be affecting our gut bacteria in subtle ways.

We are also eating more meat than we were a few decades ago and much of that meat is likely treated with hormones, which promote growth. Kuk believes artificial sweeteners may be playing a role in our weight gain, too.

What does all this add up to? Kuk says, for a start, we need to move away from weight bias – that is, simplistically judging people who are obese as being lazy and self-indulgent.

"There are many factors in our modern society that make maintaining a lean body weight more difficult, even with a proper diet and regular exercise. Nevertheless, having a good diet and regular exercise is still important for achieving the best health at whatever body weight." ●

BITTERSWEET

Sugar substitutes may compromise the health of people with obesity

WHEN IT COMES to using artificial sweeteners to cut calories and lose weight, the cons might outweigh the pros, according to York researchers.

"Our study shows individuals with obesity who consume artificial sweeteners, particularly aspartame, may have worse glucose management than those who don't take sugar substitutes," says Professor Jennifer Kuk.

Normally, weight loss is associated with improvements in health, and artificial sweeteners are often used to help individuals cut calories and manage their weight, as they are not digested by the body. However, the recent study suggests bacteria in the gut may in fact have the ability to break down some artificial sweeteners, resulting in negative health effects.

"We didn't find this adverse effect in those consuming saccharin or natural sugars," says Kuk. "We need to do future studies to determine whether any potentially negative health effects of artificial sweeteners outweigh the benefits for obesity reduction."

Data from 2,856 U.S. adults from the Third National Health & Nutrition Examination Survey was used for the study. Individuals reported their diet over the past 24 hours and were categorized as consumers of artificial sweeteners (aspartame or saccharin) or high or low consumers of natural sugars (sugar or fructose). Diabetes risk was measured as the ability to manage blood sugars using an oral glucose tolerance test. ●

Can York researchers turn the tide against a new army of superbugs?

GERM WARFARE

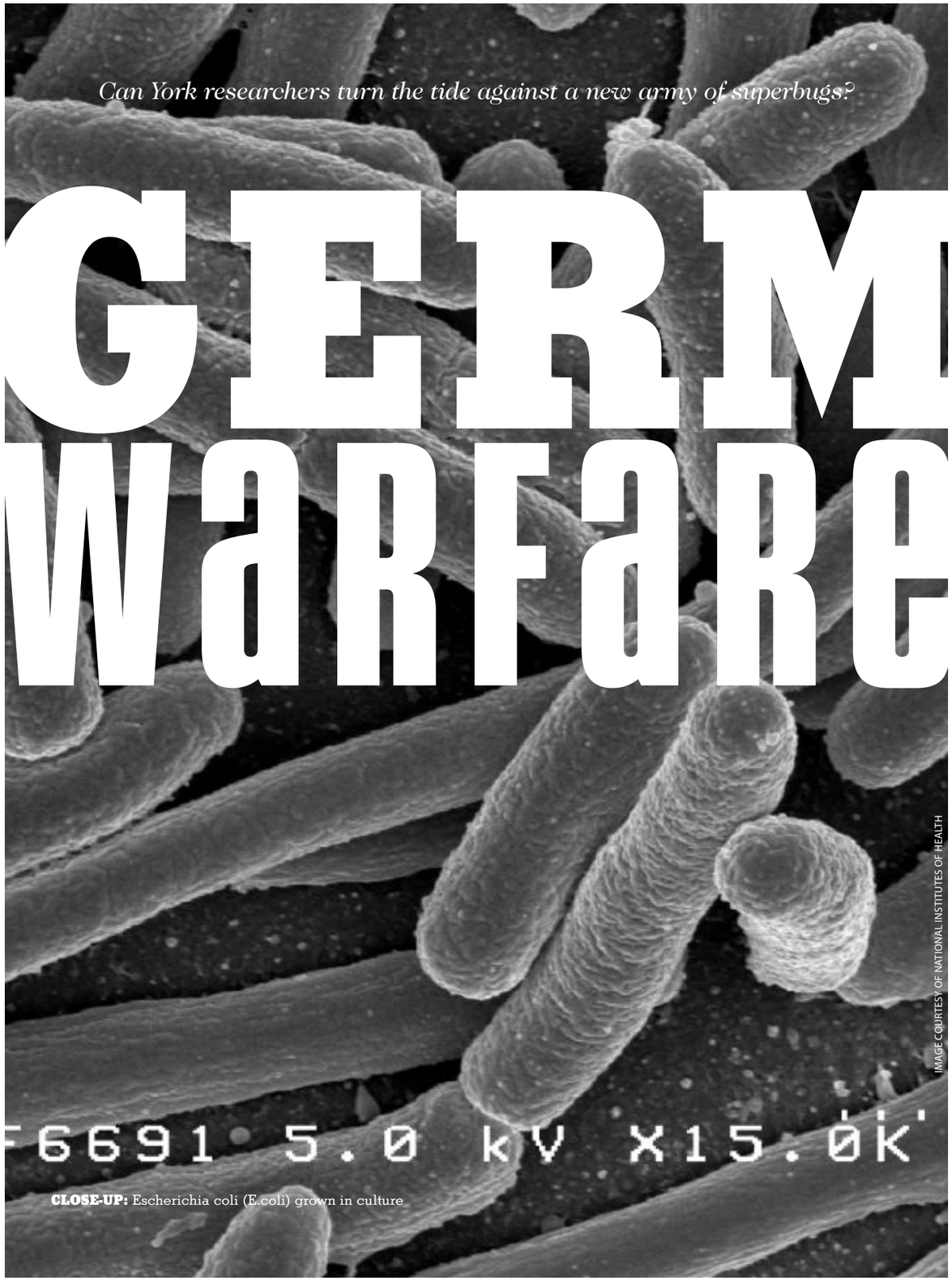


IMAGE COURTESY OF NATIONAL INSTITUTES OF HEALTH

CLOSE-UP: Escherichia coli (E.coli) grown in culture

Q&A

BY MICHAEL TODD
PORTRAITS BY MCKENZIE JAMES

FOR MILLENNIA, infectious diseases have wreaked havoc among humans. We thought antibiotics were the answer. Now there is a new generation of superbugs posing a serious threat to public health by creating bacterial infections resistant to modern medicine. Despite our best efforts, they continue to mutate and outsmart our designer antibiotics.

The York University Magazine spoke to two York professors who offered insight into their research on the war against superbugs and the power of bacterial nanomachines.

Superbugs

MICROORGANISMS LIVE ON and within us and we normally benefit from this relationship; however, these bugs can turn on us and with deadly consequences. Biology Professor Dasantila Golemi-Kotra explains how humans inadvertently contributed to the evolution of superbugs and how we might be able to make them revert back to benign organisms.

THE MAGAZINE: Tell me about your research.

GOLEMI-KOTRA: My work is focused on antibiotic resistance and trying to understand how bacteria evolved to become resistant.

THE MAGAZINE: Bacterial resistance to antibiotics is relatively recent, isn't it?

GOLEMI-KOTRA: Something we have realized is the way we – scientists – looked at antibiotic resistance was as a mechanism: bacteria evolved as a result of selection pressure exerted by the use of antibiotics in hospitals and so on. We came to understand later that bacteria (or microorganisms) have always been fighting against each other for survival and dominance of resources. But as a result of humans overusing antibiotics, this evolution has now been much faster than would otherwise be the case. It's speeded up the evolutionary resistance process.

THE MAGAZINE: Even if we took away all the antibiotics tomorrow, would bacteria continue to evolve?

GOLEMI-KOTRA: Yes, and the reason is the number of bacteria. The numbers are huge and they populate pretty much every environment on Earth. So evolution would continue, but not at the rate it is at present due to human influence. In a natural setting, their evolution would be much, much slower.

THE MAGAZINE: So bacterial evolution is tied into a need to dominate?

GOLEMI-KOTRA: Yes, they evolve in order to control the growth of other microorganisms. They either suppress for control or pretty much kill the other microorganisms. What research has shown us is that in any antibiotic we humans design – no matter how wonderful – resistance to that antibiotic will evolve. It's not a matter of if; it's only a matter of when. The rate at which resistance will emerge actually depends on how often we use an antibiotic. Hence, discovery of new antibiotics is not a long-term solution. It's a necessary approach. We wouldn't want to stop discovering effective antibiotics, but it's not the way that will lead us to a permanent solution.

THE MAGAZINE: Is that what you are interested in – a more permanent solution, and perhaps using the same tactics bacteria use themselves?

GOLEMI-KOTRA: We realize now we don't know much, in terms of the biology of killing [bacteria] by antibiotics. A lot of research was done in the early 2000s at the genome and protein levels to see what happens with the genes of bacteria when they are subjected to stress such as antibiotics. The

BACTERIA DON'T JUST GIVE UP AND DIE.
THEY'RE NOT PASSIVE. THEY PUT UP A FIGHT
AND TRY TO CONTROL THE EFFECT OF THE ANTIBIOTIC

amazing thing was that scientists discovered bacteria don't just give up and die. They're not passive. They put up a fight and try to control and manage the effect of the antibiotic.

It turns out the bacteria know exactly what they're doing, and we want to understand how that response actually happens. If we could make bacteria unable to sense the antibiotic and respond to it, there would never be any need to evolve or mount a resistance. So if we can bypass its response system, we might be getting close to some answers.

THE MAGAZINE: Knowing what you know, how much do we have to worry about some bugs being totally resistant to antibiotics?

GOLEMI-KOTRA: There are a number of pathogens that are now totally resistant and they are called superbugs. There is no treatment. It's especially risky for people with HIV or diabetes and for those who undergo transplant surgeries. The problem for these people is the immune system is already down, the body's microflora affected, so outside microorganisms can take over very quickly.

Machine Code

BACTERIA HAVE SOPHISTICATED nanomachines (about 1/1000th the diameter of a human hair) to help them stick to various surfaces and exchange genetic material and molecules essential to their survival and spread. Faculty of Science Professor Gerald Audette explains how these nanomachines are created and how they enable infection and resistance to medical treatments. His research spans crystallography, bionanotechnology, nanomedicine and structural biochemistry.

THE MAGAZINE: Tell me how you came to focus on bacteria and their behaviour?

AUDETTE: I'm a structural biochemist by training. I like looking at big protein molecules in atomic detail using X-rays. When I was a postdoc, I got interested in therapeutic targets. It turned out that the bacteria *Pseudomonas aeruginosa* uses the type 4 pilus to stick to a bunch of things, including plastics, steel, dirt – and you and me. These fairly simple structures use a common structure to bind to cell receptors. And because they use a common structure and not a common sequence, they can vary the sequence and thereby avoid our body's immune system. The systems that assemble these structures are what we call "bionanomachines," and they really are little machines – they make protein fibres, use energy to do it and are extremely small. Our goal is to understand these systems better as a means of understanding infection and resistance.

Bacteria assemble these nanomachines that they then use for any number of cool applications like, as I said, sticking to us or other surfaces, but also getting molecules in and out of cells. And those machines play a definite role in infection. Some of them look like a needle, and bacteria use them to punch holes in cells. These systems are known as secretion systems, and I and my research colleagues are interested in two different types for two different reasons.

The first system involves transferring DNA between bacteria. Bacteria can use these special protein-based nanomachines to assemble protein "bridges" (tubes of protein) to move a mobile bit of DNA from one cell to another. By determining the 3D structure of the proteins that make this system up, and how they interact at the molecular level to make up the functional secretion system, we can figure out how it works and also get ideas about how to possibly render it inactive – or less active. That could help make the current arsenal of antibiotics more useful, in the sense that it could take bacteria longer to develop resistance to those antibiotics.

The second system is a structure known as a pilus. Think of it as a grappling hook. We found a version of the pilin (the pilus is thousands of copies of the pilin) that can assemble pilus-like structures without the bacterial system being involved. We're interested in understanding how this happens. It's another way bacteria use a large number of different methods to get molecules across their fences –

DASANTILA GOLEMI-KOTRA: Understanding the evolution of bacteria

GERALD AUDETTE: Living in harmony with germs

TO FIGURE OUT WHAT'S GOING ON,
YOU'VE GOT TO SOLVE THE PUZZLE. AND TO SOLVE THE PUZZLE,
YOU'VE GOT TO PUT ALL THE BITS TOGETHER

whether to inject something into you, me or somebody else; to stick to surfaces; aid infection; or transfer DNA from one cell to another.

THE MAGAZINE: So the challenge is to look at the myriad variations in these nanomachines?

AUDETTE: Yes, and how they're put together. To figure out what's going on, you've got to solve the puzzle. And to solve the puzzle, you've got to put all the bits together. This is at the atomic level: Here's atom No. 1 and it's connected to atom No. 2, and so on. We use X-ray crystallography. We generate tiny crystals of the proteins we are studying and place them in an X-ray diffractometer. We then determine the structure of the protein within the crystal by analyzing the diffraction pattern, which looks like a series of spots that are produced when a beam of X-rays interacts with the crystal.

THE MAGAZINE: We often talk about viruses and bacteria in the same breath, but are they two distinctly different things?

AUDETTE: They are two different things. There are viruses that infect bacteria, but not the other way around.

THE MAGAZINE: Can you outline how they differ?

AUDETTE: Bacteria are living things. Given the right set of nutrients and proper temperature, they will grow all on their own. If you think of a bacteria most people are familiar with, such as E. coli, and you put it in a medium and give it some air and grow it at 37 C, each cell will become two cells quickly; in fact, it will double every 20 minutes. Our human cells also grow over time, but bacteria are very good at growing very fast – so fast they can overwhelm their host.

THE MAGAZINE: So viruses are not living?

AUDETTE: No. They cannot grow or divide on their own, so they aren't considered "alive" in the way you and I think of the term. They've got to usurp our cells or bacterial cells. So a bacterial infecting virus will land on the bacteria and get its DNA in there, and once in, it codes for all it needs to make more of itself, but it can't do it all on its own – it has to have the host. Viruses need something to stay alive and replicate, somewhere that will provide them with the machinery to survive and make more of themselves.

THE MAGAZINE: Is it fair to use words like "bad" or "good" when it comes to bacteria?

AUDETTE: Some bacteria are bad, some aren't. E. coli, for instance, is fairly benign for the most part. But Walkerton had a somewhat bad strain of E. coli (strain O157:H7) contaminate its water – it was a case of a good bacteria gone bad. Or if you think of hamburger fever, often a result of undercooked hamburgers, where you've got a bacteria (again, E. coli O157:H7) coming in and saying, "Great, I've got a nice warm environment to flourish in!" Another is Helicobacter pylori; it's in many of our stomachs in small amounts as part of the normal bacterial population (often called the "normal flora" and, more properly, "microbiota"). If you get a bit of an ulcer and the lining of your stomach gets weakened, it can colonize that and cause gastroenteritis and if not treated can result in gastric cancer. But if there's no problem, it just hangs out and does what it does. About 80 per cent of humans have it in their stomachs and never know it's there. It helps us digest things, but like anything it's opportunistic. Bacteria all have their preferred living environments and they're also competing against one another for ascendancy.

THE MAGAZINE: Has our cleanliness-obsessed culture worked against us when it comes to living in harmony with germs?

AUDETTE: I think in a way it has. I'm all for cleanliness, but I don't advocate going overboard. The challenge comes because our bodies are designed to be protective, so we get colds and sniffles and get dirty. But this can help strengthen our innate immune system, which is always on, and our adaptive immune system, which gets exposed to things in our environment – in the soil or air or water – and learns to fight them off. Some people worry that because we are obsessed with not being exposed to microbes or bacteria, we have adapted to a state of continual cleanliness, which is a construct of our modern world. The worry is that when a bigger germ threat comes along we'll be less able to handle it, which means we need to understand how bacteria use the tools they have to aid in infection and resistance. ●

BY AMY STUPAVSKY

New scholarship keeps father's legacy alive

Love of Learning

RAYAN RAFAY: Making his father proud

GROWING UP, Rayan Rafay (iBBA '08) heard these words over and over from his father, Syed Tahir Rafay: "Study whatever you want to study, as long as you study." His passion for education inspired Rafay to create a memorial scholarship in his father's name.

"For my dad, higher education was paramount, particularly the experiences and friendships one develops in university," says Rafay. "He trained as a doctor in Pakistan, and during his studies he built lifelong friendships across countries and oceans."

When Rafay was in his first semester at the Schulich School of Business, his father was diagnosed with terminal cancer and passed away four months later. The importance his father placed on ensuring Rafay and his sisters were well-informed citizens who read the newspaper and volunteered with political parties deeply impacted Rafay.

"My father had a profound love for Canada," he says. "Coming from Pakistan and Saudi Arabia, he saw what countries could become if their citizens didn't protect democracy. "

Rafay established the Syed Tahir Rafay Award to benefit undergraduate students who are actively engaged in helping their community and working towards making Canada a better place. Although Rafay studied business at York, the scholarship is preferential to students pursuing degrees in political science, human rights and equity studies, social work or law and society.

ALL IN THE FAMILY: Syed Tahir Rafay (top); Rafay family photo (bottom)

"People study these disciplines because of passion and desire to make the world better, not to make money," says Rafay. "I'm happy to make a student's academic journey easier while they're working to change society."

As a young alumnus, Rafay upends the notion that philanthropy begins only when one is older and established.

"I'm hyperconscious that circumstances can change at any time," he says. "Part of that realization came from graduating in 2008 and starting my career in Hong Kong; I was on the trading floor watching the world disintegrate. I feel a responsibility to use my current success to help others."

Now based in California as the managing director, head of portfolio management at Unison Home Ownership Investors, he and his wife, Nida (BBA '08), have volunteered with The Citizens Foundation charity to build gender-equal schools in Pakistan. Rafay also serves as vice-chair of the board of the Frontier College Foundation, a Canada-wide literacy organization.

"My dad is the reason I'm passionate about educational initiatives," says Rafay. "There's not a day that goes by that I don't imagine what he'd do or think in certain situations, and it always seems to come back to the importance of education." ●

Classes

1973

DICHEK, BERNARD (BA) founded a film vacation and study workshop in Italy called the Arpino Film Experience. The five-day retreat takes place in the hometown of Marcello Mastroianni, one of the film greats he learned about while studying at York. It provides an opportunity to visit the locations where the films of Fellini, de Sica and other Italian masters were made, and to discuss the films with like-minded people from around the world. There are also workshops in photography, creative writing and screenwriting. Fellow York grad **JAMES CROWE** (BA '73) is one of the workshop instructors.

1974

FREEMAN, SHELLEY (BA Hons. Winters) recently exhibited her paintings on the dimension of depth, both underground and underwater, at the Gallery at Victoria Hall in Westmount, Que. She continues to live and paint in Montreal.

1975

WHITTAKER, SHEELAGH (MBA) published her second book, *Evaline: A Feminist's Tale*, in 2016. The book tells the story of a young woman who comes of age in the '70s and sets about to live the life to which she believes she is entitled.

1978

DI CARLO, LINA (BA Vanier) published her memoir, *Just Watch Me! The Story of my Life*, in 2015. It chronicles her life in Italy, where she contracted polio at 10 months old, and her move to Canada in 1966.

In Canada, she learned English, graduated from York, studied French at Laval University in Quebec City, got married and retired in 2013.

1984

VALLE, GINA (BA, MEd), in partnership with UNESCO, recently published the children's book *The Best of All Worlds – Le meilleur monde imaginable* (At One Press) in several languages. She describes it as a quintessential Canadian book and a fabulous way to celebrate all that we can be as we lead up to Canada's 150th anniversary.

SQUIRES, SEAN (BA '85) will be cycling 6,600 kilometres across Canada this summer with fellow alumnus **NIR MELTZER** (BA '88) to raise awareness, hope and funds for pediatric brain tumour research at SickKids Foundation through Meagan's Walk. The friends and avid cyclists began Bike for Kids 2017 on June 2 in Vancouver and will end about seven weeks later in St. John's. They have raised $42,000. Donations can be made at MegansWalk.com.

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Anchor of Change

How one York grad changed the course of broadcast news

BY ALEXANDRA LUCCHESI
PHOTOGRAPHY BY SOFIE KIRK

YORK UNIVERSITY ALUMNA Ginella Massa (BA '09) thought her dream of becoming a news anchor would always remain just a fantasy. She could never have anticipated the groundbreaking opportunity that would change her life's direction – and the face of broadcast journalism – literally overnight.

Massa studied communications and sociology at York and journalism at Seneca College, and spent several years working behind the scenes as a consultant, radio producer and newscaster. Then, in January 2015, while working as a video journalist with CTV News Kitchener, one on-air appearance turned Massa into Canada's first hijab-wearing television news reporter.

"I had a colleague tell me, 'I don't think they'll ever put a woman in a hijab on the news, because it's just too distracting,' " says Massa. "But I was given an opportunity … and I'm really grateful that someone could see past my appearance and look at what I had to offer and what I bring to the newsroom."

After her television debut, an overwhelmingly positive local response followed. Massa received emails with comments like, "It's so great to see a woman in a hijab on TV" and "It's about time!" People would stop her on the street, welcome her to the city and commend her on the great job she was doing. This response, though unanticipated, was a pleasant surprise, and it inspired Massa in her next career move.

During her next job as a reporter for CityNews Toronto, Massa was given the chance to anchor the news desk, and this time the response was international. Once again she made history, now as the first woman in hijab to anchor a major Canadian newscast; but with the recognition also came negative responses. She received a lot of praise in the mainstream media for her unprecedented foray, but social media was not so kind. Destructive comments flooded in, many that Massa found difficult to read.

"It was mostly positive, but sometimes those negative voices, even if they are few, hit much harder and much louder, and they become all you can focus on," she says. "I always want the measuring stick to be my work: Am I being a good journalist? Am I being fair? Am I asking the right questions? If you have criticism about that I'll gladly take it. But [if] you just have a problem with the way that I'm dressed, that's not really my issue – that's yours."

Despite social media's ubiquitous trolls, Massa is determined to continue reporting the news. Now she's focusing on who Muslim women really are, and wants to "tell people about what Muslim women can be," she says. "We exist as teachers, as doctors, as lawyers – as people who are vital to our community. But when we're not represented in places like the media, people forget that.… I'm doing my job, I'm reporting and I'm being a journalist, but I also happen to be wearing a scarf while I'm doing it." ●

Family Affair

Unleashing children's potential is a personal calling for Karl Subban and his daughters

BY SHARON ASCHAIEK PHOTOGRAPHY BY MIKE FORD

WHEN WE THINK OF Karl Subban (BEd '90), the achievements that come to mind for most of us are the hockey-related breakthroughs made by all three of his sons: Malcolm and Jordan – both AHL players and NHL prospects – and superstar P.K., who was the NHL's top defenceman in 2013. It's an against-the-odds feat that came about through his intensive investment in their talent and has earned him the reputation of "ultimate hockey dad."

What's less well-known about Subban's knack for tapping people's potential is how effectively he has applied it with thousands of other kids across Toronto. For almost three decades, he worked as an educator for the Toronto District School Board, serving at 10 different schools in the city's northwest area, including some in socioeconomically disadvantaged neighbourhoods. His skilful approach to helping students learn, combined with his caring attitude and his emphasis on a disciplined, respectful learning environment, helped boost the academic performance and self-esteem of many students, including some of the city's most vulnerable children.

"Once kids know you care about them and believe in them, they understand they have what it takes to succeed," Subban says. "Then you are on the road to changing lives and making a difference."

Wanting to strengthen his expertise to stay competitive, Subban turned to York University's Faculty of Education, where he completed part-time courses to become a specialist in science, physical education and special education. A little later, following the advice of a colleague who saw his leadership potential, he took principal-qualification courses at York. He says that while at the University, he learned valuable lessons not only from his professors, but through the collaborative work he completed with other students.

"So many of the assignments were not done individually, but in teams, and you learn a lot more while working with others," he says. "Thanks to York, I grew a lot. I learned what I was capable of."

After working in the classroom for five years, Subban began his foray into administration, serving as a vice-principal and later principal at various elementary and middle schools. In 2006, he requested a transfer to a school where he thought he could make a bigger difference: Brookview Middle School, in Toronto's struggling Jane-Finch neighbourhood. With his firm but charismatic style, he focused on boosting the students' capacity to learn and raising the school's standardized test results. He insisted on spotless hallways, orderly lineups and the recital of a daily pledge that included the line, "I come to school to save my life by working hard to be a better person and a better student."

Central to Subban's approach was encouraging students to focus on the four Ts: time – arriving at school punctually; task – doing the required task to the best of your abilities; training – continually practising learned skills in order to improve; and team – cooperating with others to achieve better results. He also believed that deeply understanding children's interests, abilities and needs is essential to building their strengths and addressing their weaknesses. To that end, he worked hard at getting to know his students, and he encouraged his teachers to do the same.

"It's so important that in their early years, children get lots of love, attention and support," Subban says. "Teachers need to really know the children and where they are academically, so they know how to work with them." Although Subban retired in 2013, he has continued to be active in trying to positively impact children's lives. He worked on a project with Canadian Tire to teach families about the benefits of playing hockey.

Subban's dedication and hard work as an educator have inspired his two daughters, Nastassia and Natasha, to follow in his footsteps. Both remember joining him at his schools for different occasions and seeing him joyfully interact with students and get lots of hugs. Sometimes, they say, he wore funny ties to school to endear himself to the kids. His younger daughter Natasha says many of her teachers had worked for her dad, and spoke fondly about his commitment to students.

MEET THE SUBBANS: Natasha (left), Nastassia (middle) and Karl (right)

Both Nastassia and Natasha pursued their bachelor of education degrees at York, and recall different highlights of their training. For Nastassia, it was learning about issues of equity and social justice in education from social studies and culture Professor Peter Flaherty. For Natasha, it was becoming motivated to teach math, a subject she had struggled with in high school, but became manageable and enjoyable thanks to the guidance of Professor Lyndon Martin.

Nastassia is currently completing a secondment as an education instructor at York, but before that she taught history and phys-ed at Westview Centennial Secondary School in the Jane-Finch neighbourhood. Like her father, she went above and beyond her role by leading the school's literacy improvement efforts and organizing its hot lunch program.

Natasha, meanwhile, most recently taught a class for students with learning difficulties at Elmbank Middle Junior School near Finch Avenue and Martin Grove Road (she is currently on maternity leave with her first child – her parents' fourth grandchild). She was able to elicit the children's best efforts with the same approach she learned from her father, by helping them discover their special gifts.

"I always remember how my dad said that every kid has a passion," Natasha says. "You have to find out what they like and let them know you care, and they will open up to you."

Of course, Karl is delighted to see how his daughters have likewise evolved into hands-on educators who are helping kids reach their full potential.

Professor Martin, Natasha's former teacher and now the dean of York's Faculty of Education, says the accomplishments of Karl and his daughters as educators reflect exactly the kind of outcomes the Faculty tries to achieve with its emphasis on training teachers to be engaged and progressive changemakers in education.

"Our program has a very strong focus on social justice and on teaching for diverse and inclusive classrooms," Martin says. "The Faculty of Education is proud to have had a role in helping to shape how the Subbans think about education and in developing their skills." ●

TOP (LEFT TO RIGHT): Marcia Denton, Anne Wright, Ruth Ann Whipp, Penny Douros, Eleanor Copeland and Hannah Rosenbloom (seated)
BOTTOM (LEFT TO RIGHT): Hannah Rosenbloom, Penny Douros, Anne Wright-Howard, Ruth Ann Whipp, Eleanor Copeland and Marcia Denton

WE USUALLY THINK OF 50TH ANNIVERSARIES as pertaining mostly to weddings. Rarer is a celebration of friendship that stretches back that far – and had its roots in university! But that's the reality for the six York grads pictured here. Anne Wright-Howard explains: "We met in September 1966. With the exception of Eleanor, we were all in the women's residence at Founders College, where the six of us forged a lasting friendship. Founders had a warden named Mr. Bull whose job it was to sit at the residence front door to ensure no males entered. There were only two colleges, Founders and Vanier, we had most of our lectures at Burton Auditorium and the only library was the Ross Science Library to which we had to trek over vast empty snow-blown expanses. We have kept in regular touch over the years and celebrated our 50th anniversary last September." ●

Have a great photo from your days at York?

Email us at magnotes@yorku.ca

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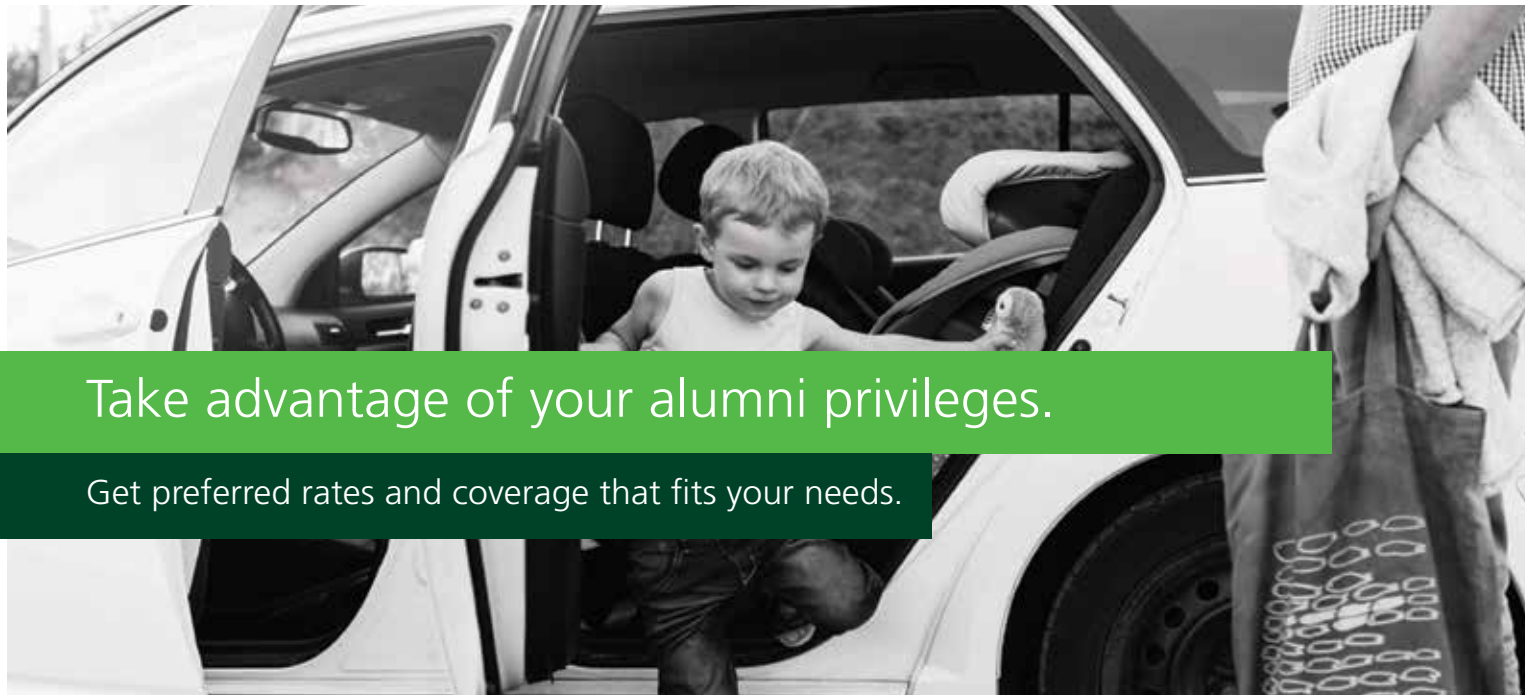

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