

#### **REACHING OUT**

Expanded mental health services for youth

#### **BRAIN TRUST**

New research on HIV/AIDS and lung disease

### CULTURE AND HEART DISEASE

How ethnicity influences health

## Realizing the Future



#### As I approach the end of my first year as

Chair of St. Paul's Hospital Foundation, I am incredibly proud of what we have accomplished in that time and excited about what lies ahead.

The renewal of St. Paul's Hospital is certainly on the top of our minds, and the Foundation will be eager to do its part to support the project once its parameters have been established. To that end, Providence Health Care, which operates the hospital, is working with the Ministry of Health and Vancouver Coastal Health to begin a business case development process for the renewal. We will keep you updated as the process progresses.

In the meantime, we are working to keep our partners engaged as we prepare for the renewal. This year, we convened our first summit of our Governors Council, a special group of community leaders who will play a crucial role in engaging our key stakeholders in the months ahead. After that summit, I felt truly inspired about our potential to realize the vision of a renewed St. Paul's Hospital in the near future.

Of course, our future starts with a good foundation, and I am pleased to say that St. Paul's Hospital Foundation is as strong as it has ever been. Fresh off raising a record-setting \$15.99 million in our 2011-2012 fiscal year, we have continued to see a number of successes, many of which are highlighted in this issue of Promise.

Thank you to all of you who contribute to the compassionate care and world-leading research and teaching that takes place at St. Paul's Hospital - both today and in the years to come.



David Poole Chair, St. Paul's Hospital Foundation Senior Vice-President, BC & Yukon Region, Scotiabank

## **Amazing Discoveries**

#### Since joining the Foundation in September,

I've been amazed to discover all the world-leading care, research and teaching taking place here at St. Paul's. I hope you feel the same way when you read this issue of Promise, which we've organized around a few key themes.

First, we look at mental health and its role in addressing medical and social challenges faced by the populations we serve. Our cover story (Changing the Labels, page 8) focuses on how our Mental Health Program helped a patient turn his life around after he was diagnosed as HIV-positive, and how it continues to revolutionize the treatment and perception of its patients. Then, on page 11, we discuss the expansion of our Inner City Youth Mental Health Program to support youth with mental health issues in Vancouver's Downtown Eastside.

Second, we look at research and its role in advancing patient care. On page 7, we see how research is driving new discoveries in foot and ankle surgeries. On page 12, we profile talented investigators and their research on HIV/AIDS and the deadly lung disease COPD. On page 14, we meet a heart transplant patient of Chinese descent and learn about the effect his ethnicity may have had on his disease.

Our most important theme, though, is people: the physicians, researchers and staff who inspire us through their service to the community; the donors who support their work in more than 20 areas of the hospital; and the patients whose lives they change. I've had the pleasure of getting to know many of you since I joined St. Paul's; to you, and to those I've yet to meet, thank you for your support.



Dick Vollet President and CEO St. Paul's Hospital Foundation



## **Promise**

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St Paul's Hospital FOUNDATION



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#### **COVER**

#### 8 Changing the Labels

St. Paul's Mental Health Program is working towards revolutionizing the treatment of mental health issues, just as it did for HIV/AIDS care 30 years ago. BY MELISSA EDWARDS

#### **FEATURES**

#### 11 Reaching Out

A \$1.6 million donation from Silver Wheaton will allow St. Paul's Inner City Youth Mental Health Program to expand its services for at-risk youth in Vancouver's Downtown Eastside.

BY MELISSA EDWARDS

#### 12 Meeting of the Minds

New Investigator Awards are funding groundbreaking medical research by four of St. Paul's Hospital's brightest young doctors.

BYNANCY GRATHAM

### 14 The Culture of Heart Disease

St. Paul's is taking the influence of ethnicity on health to heart.

BY HELENA BRYAN

#### **DEPARTMENTS**

#### 2 FROM THE TOP

Realizing the Future; Amazing Discoveries
BY DAVID POOLE AND DICK VOLLET

#### 4 FRONTLINES

A \$5-million gift from Goldcorp Inc. will support mental health and addictions programs in the DTES; Robert Kenny's legacy gift to the Foundation; Virtual Teaching Laboratory update; Revisit The Province's Heartbeat series; 2012 Lights of Hope raises \$2.4 million; Strike Out Heart Disease returns for the 2013 baseball season; Scotiabank Vancouver Half-Marathon & 5K Charity Challenge; St. Paul's in the news; Five great ways to give

#### 7 BREAKTHROUGHS

St. Paul's Foot and Ankle Clinic is setting the standard for orthopaedic care in this fast-growing subspecialty.









#### Game-changing Gift

A transformational \$5-million donation from Goldcorp Inc. will support innovative Vancouverbased addiction and mental health programs.

**Vancouver-based resource firm Goldcorp Inc.** has donated \$5 million to two unique addiction and mental health programs serving Vancouver's Downtown Eastside (DTES) – the St. Paul's Hospital Goldcorp Fellowship in Addiction Medicine (see the Fall/Winter 2012 issue of *Promise*) and Vancouver Coastal Health's Assertive Community Treatment program.

"Goldcorp wants to help create a healthier future for the Downtown Eastside and recognizes the urgent need for support in addressing severe mental illness and addiction," says Chuck Jeannes, president and CEO of Goldcorp. "We're pleased that our donation will enable health-care experts to leverage one another's work, and produce a transformational and lasting impact in the lives of Vancouver's most vulnerable residents."

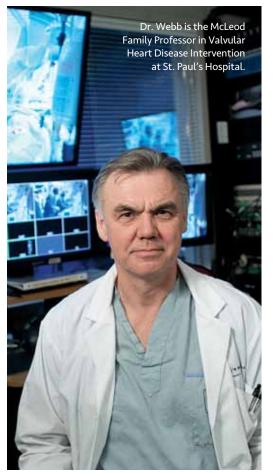
Of the \$5-million donation, \$3 million will be used to establish the St. Paul's Hospital Goldcorp Fellowship in Addiction Medicine. The Fellowship, Canada's only addiction medicine training program west of Ontario, will address a critical lack of skilled, specialized addiction medicine specialists in B.C. by providing training to 20 fellows over five years.



L-R: Kip Woodward, Vancouver Coastal Health; Dr. Evan Wood, BC Centre for Excellence in HIV/AIDS at St. Paul's; Anne McNabb, Vancouver Coastal Health; Chuck Jeannes, Goldcorp Inc.; Dick Vollet, St. Paul's Hospital Foundation; Ron Dumouchelle, VGH & UBC Hospital Foundation.

The Fellows will combine efforts with partners such as the Assertive Community Treatment program to work towards improving the health and lives of individuals and families struggling with mental health and addiction issues.

Recruitment of the first Fellows is already in progress. Watch for updates in future issues of *Promise*.



#### Virtual Teaching at St. Paul's

Funding of broadcast facilities enables St. Paul's to teach colleagues around the world about procedures pioneered at the hospital.

#### Thanks to its generous donors, St. Paul's Hospital Foundation has

completed the funding of a television production and broadcast centre that will enable health-care professionals around the world to learn about life-saving procedures pioneered at St. Paul's Hospital.

The Virtual Teaching Laboratory or VTL (featured in the Spring/ Summer 2012 issue of *Promise*) is used to broadcast procedures at St. Paul's to lecture theatres inside the hospital and locations around the world. Through this technology, St. Paul's cardiologists and cardiac surgeons can share their knowledge with thousands of health-care professionals at a time, without having to leave the hospital.

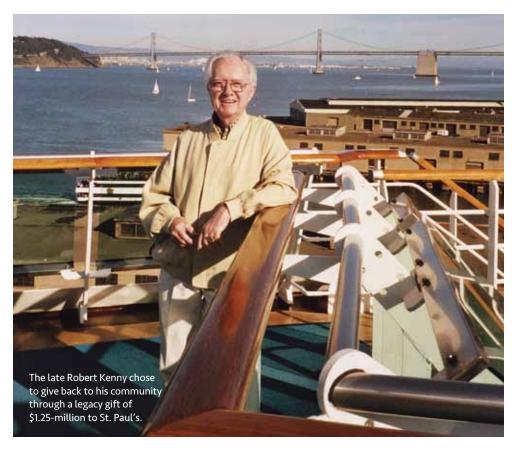
"This is a fabulous development that will allow physicians elsewhere to observe our new transcatheter aortic-valve procedures where they would not otherwise have the opportunity," says Dr. John Webb, director of interventional cardiology at St. Paul's. "We will be able to review our new procedures and see how we can continue to do better."

Many of the procedures broadcast by the VTL will be performed by Webb. He is recognized internationally as a pioneer and teacher of transcatheter aortic-valve implantation, a minimally invasive procedure in which a replacement heart valve is inserted through a small incision and threaded up to the heart through an artery. Close to 800 of these procedures have been performed at St. Paul's.

St. Paul's Hospital Foundation thanks all the donors who helped complete the \$500,000 fundraising campaign, including Edwards Lifesciences (Canada) Inc. and the John C. Kerr Family Foundation.

#### A Gift that Leaves a Legacy

Inspired by the work of St. Paul's Hospital during his lifetime, Robert Kenny decided to remember the hospital in his will.



St. Paul's Hospital Founda-

**tion** recently received the largest bequest in its history from a long-time friend and supporter of St. Paul's Hospital, the late Robert (Bob) Kenny.

"It was health that grabbed him," recalls Kenny's friend and estate executor, Ronald Paton. "He wanted to do something that would do the greatest good." Kenny's donation of \$1.25 million was made as a gift in his will to St. Paul's Hospital Foundation of Vancouver and will go towards the purchase of a \$3.5-million computed tomography (CT) scanner to be located within St. Paul's Teck Emergency Centre. This new technology will address the glaring lack of a CT scanner in the Centre, enabling staff to

more quickly and safely diagnose and treat emergency patients.

"I think we've been able to carry out his wishes," says Paton.

Kenny was born in Nanaimo, B.C., in 1925. Shortly after his birth, his family moved to Vancouver, just a few blocks away from St. Paul's Hospital. Kenny would spend the rest of his life in the city, going on to enjoy a successful career as an accountant in the forestry industry.

Paton first met Kenny and Kenny's partner of 54 years, Earl Crocker, on a trip to Hawaii in the mid-1970s. Paton recalls that Kenny had an amazing memory and could hold a conversation on a diverse range of topics – whether it was the stock market, politics, religion or classic movies.

Kenny and Crocker were both patients at St. Paul's at various times during their lives. After Crocker's death, Kenny formed a relationship with the Foundation and became an annual donor. He made gifts, of either cash or securities, and began giving to St. Paul's Lights of Hope campaign in 2004 in commemoration of Crocker. Kenny passed away in January 2012.

"He was a very, very generous man," says Paton.
"Life had been good to him; Vancouver had been good to him. This is where he lived his life and he just felt that he should give back."

To learn more about planned giving and how to make a gift in your will, please contact St. Paul's Hospital Foundation at 604-682-8206 or visit www.helpstpauls.com.



Scotiabank Half Marathon& 5K Charity Challenge Run • Walk • Raise Funds for St. Paul's

#### Ready, Set, Go!

**St. Paul's Hospital Foundation** is looking for people to run, walk and raise funds for St. Paul's Hospital during the Scotiabank Vancouver Half-Marathon & 5K Charity Challenge on Sunday, June 23, 2013. Visit www.helpstpauls.com for more details.

#### Strike Out Heart Disease

#### Following last year's inaugural edition

of Strike Out Heart Disease, St. Paul's Hospital Foundation and the Vancouver Canadians Professional Baseball Club are once again partnering to build a healthier future for our community. Through the program, sponsors make a donation to the provincial Heart Centre at St. Paul's Hospital every time a Vancouver Canadians pitcher strikes out a member of the opposing team during the 2013 season. Matching funding will be provided by the John C. Kerr Family Foundation. Visit www.helpstpauls.com for more details.



#### 2012 Lights of Hope campaign

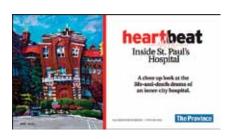


**Donors throughout B.C.** gave \$2.4 million towards St. Paul's Hospital's greatest needs during the 2012 Lights of Hope campaign. Thank you to everyone who showed their support for world-leading care, research and teaching at our hospital! The campaign has now raised more than \$21 million since 1998.

#### The Province's Heartbeat series

#### **Reporters and photographers from**

The Province newspaper were given eight months of unprecedented access to life at St. Paul's Hospital in 2012. The result was Heartbeat, a multi-part series on the difference St. Paul's Hospital is making in the lives of patients from all over B.C. The Province is now making it possible to relive the series as an e-book, St. Paul's: Birth, Death and Miracles, available for



\$3.99 from *The Province*. Visit www.helpstpauls.com for more details.

#### St. Paul's in the news

**Thirty years of the cochlear implant** – In 2012, St. Paul's Hospital celebrated the 30th anniversary of its cochlear implant program and the first cochlear implant ever done in Canada. The implant is used to help patients recover a semblance of hearing by transmitting signals to the brain that are then interpreted as different sounds. The cochlear implant program at St. Paul's now performs 25 of these procedures for patients throughout B.C. each year.

**Dual milestones for the VAD program** – Also in 2012, St. Paul's Ventricular Assist Device (VAD) program, which offers mechanical hearts to patients awaiting heart transplants or who have weak hearts that need a "break" to recover, celebrated both its 10th anniversary and its 100th procedure performed. ■

# GREAT WAYS TO SIVE

#### 1. Become a monthy donor

Automatic payments from your credit card or bank account are convenient, and save you the time and money it takes to mail in donations. At the end of the year, you'll be surprised by how your contributions and tax credits have added up, while providing a stable and reliable source of funding for St. Paul's. Call 604-806-8912.

#### 2. Give a gift of securities

Save a significant amount of money at tax time by donating securities, such as publicly traded shares and mutual funds, even if you have a capital loss! Call 604-806-8923.

#### 3. Honour a loved one

A gift made in honour of a family member or friend can be a special and unique way to pay tribute to them or their memory, or to celebrate a milestone occasion such as a birthday or wedding. Call 604-806-8912.

#### 4. Make a bequest or a planned gift

Plan for a future gift either in your will or through another means such as life insurance, an RRSP/RRIF or a trust. Call 604-806-8271.

#### 5. Contact Us

Mail: 178-1081 Burrard St., Vancouver, B.C. V6Z 1Y6

Phone: 604-682-8206 E-mail: sphfoundation@

providencehealth.bc.ca

Web: www.helpstpauls.com

# Stepping Up

Surgeons at St. Paul's Foot and Ankle Clinic are leaders in this fast-growing subspecialty.

or the past three years, Carol Sheehan was dogged daily by the effects of a degenerative arthritis condition that had worn away all the cartilage from her ankle joint. It left the anthropologist and author in chronic pain and unable to pursue her work, studying and writing about First Nation's art from British Columbia's west coast.

"Particularly in the last year, there were frequent occurrences when it felt like the bottom of my tibia would grate over the top of my ankle bone, creating excruciating pain," says Sheehan. "Every time that happened it was like an electrical shock; it would take me hours to recover."

Her Vancouver Island doctor referred her to St. Paul's Hospital's Foot and Ankle Clinic, Canada's first comprehensive foot and ankle program and a leading centre for research, surgical innovation and training.

Less than two months after receiving total ankle replacement surgery at St. Paul's, Sheehan is virtually pain-free and looking forward to resuming her career.

#### **MAIOR ADVANCE**

Dr. Murray Penner, co-founder of the clinic and head of St. Paul's Department of Orthopaedic Surgery, says the advent of ankle replacement surgery has been a major boon in helping patients like Sheehan regain a greater range of motion than would be possible through traditional procedures.

"Up until about 12 years ago, there was really only one treatment for ankle arthritis and that was ankle joint fusion," says Penner. "When the first ankle replacement systems became available in Canada, we were early adopters of that technology and began to use it in an increasing way."

#### **RESEARCH PATH**

"Foot and ankle is now the fastest-growing subspecialty of orthopaedics in Canada, but one of our big challenges is securing funding for research," says St. Paul's orthopaedic surgeon Dr. Alastair Younger.



Today, thanks to the generous support of St. Paul's Hospital Foundation donors, the St. Paul's Foot and Ankle Research Office continues to study and track all minimally invasive arthroscopic surgeries and surgical outcomes. Younger says that this data is vital to improving the treatments for patients who come to the Foot and Ankle Clinic with everything from diabetes to cerebral palsy, stroke, chronic arthritis or bone deformity, along with those who require limb reattachment.

#### **REACHING NEW HEIGHTS**

The innovations in care developed through the research of Drs. Penner, Younger and colleague Dr. Kevin Wing has caught the attention of the medical community at St. Paul's and beyond.

Hospitals in Ottawa and Edmonton are both in the process of adopting St. Paul's F.A.S.T. (Foot and Ankle Screening Triage) Clinic. The clinic comprises a team of podiatrists and general practitioners who are able to fast-track the treatment of non-surgical problems, thereby drastically reducing wait lists.

Within St. Paul's itself, the success of the Foot and Ankle Clinic has inspired spe-



cialists in distal extremities (such as hands, wrists and feet) to follow suit with the establishment of a Hand and Wrist Clinic.

"Our research has been extremely helpful in outlining the needs of our patients," says Younger, "and that helps us deliver much better care."

To find out more about how you can support the Foot and Ankle Clinic at St. Paul's Hospital, please contact St. Paul's Hospital Foundation at 604-682-8206 or visit www.helpstpauls.com.

ean Thullner finishes up a call with his contractors. They want to reschedule some work that could have delayed the launch of his new salon (which officially opened in April 2013). It's the type of workday problem he couldn't have imagined 20 years ago. That's when Thullner's doctor told him he had HIV – and perhaps only a few months to live. Understandably, his outlook on life took a turn for the worse.

"I gave up," says Thullner. Fear, depression and exhaustion led to a serious breakdown, prompting Thullner to seek help at St. Paul's Hospital – not just for the treatment of the physical effects of the virus, but for the mental effects as well.

"Through their counselling and guidance, I turned my life around," he says.

#### **COMPASSIONATE CARE**

Thullner's journey towards wellness was a roller coaster of despair and hope, sickness and recovery. Through it all, St. Paul's was a constant source of medical and mental support at a time when people with HIV were still being shunned.

"I owe my life to St. Paul's," says Thullner. "There is so much patience and kindness in that hospital. Everyone is treated the same; no one is turned away."

Dr. Jennifer Wide, a psychiatrist in the Immunodeficiency Clinic, says St. Paul's never accepted the paradigm of fear and neglect that defined early HIV/AIDS care.

"These patients go through so many challenges and stresses, and then they are faced with these stigmas," says Wide. "What that does to the psyche is a huge burden to overcome.

"As doctors, we have to differentiate what is clinical depression, what is life history and what is a side-effect of the medications. Teasing that out is a unique skill."

#### FIGHTING THE STIGMA

Today, St. Paul's Hospital's Mental Health Program works towards removing the stigma from all mental health issues, just as the hospital did for HIV care two decades ago.

St. Paul's Hospital works towards revolutionizing the treatment of mental health issues, just as it did for HIV/AIDS care three decades ago.

by Melissa Edwards

Dr. Anna Nazif, medical director of emergency psychiatry, says that many people still view addiction and mental illness as a personal failing. This mistaken attitude is particularly hurtful to inner-city populations, like those living on Vancouver's Downtown Eastside (DTES).

About 25 per cent of the people who come to St. Paul's Hospital's Emergency Department live in the DTES, and last year almost 10 per cent were affected by substance misuse and multiple mental

"All patients are complex, but ours are incredibly complex," says Jennifer Duff, program director of Mental Health at St. Paul's. "These are the most vulnerable people in our society, and we are their advocates. It's a challenging population, but also a very rewarding one to care for."

Specialized emergency and HIV psychiatric care are only two aspects of the Mental Health Program at St. Paul's.

"We're trying to provide the best care for every patient that comes to our program, whether they are the most disadvantaged person from the Downtown Eastside with multiple addictions and psychiatric issues or an executive from Yaletown who comes to us with depression," says Dr. Maria Corral, head of Psychiatry.

In addition to the 60 psychiatrists who report to Corral, St. Paul's Mental Health Program involves 200 staff, including nurses, occupational therapists, psychologists, physiotherapists, social workers, pastoral care workers and dietitians, who report to Duff. The program encompasses a Complex Pain Program, a groundbreaking provincial eating disorders program that serves the most complex cases in B.C., a Mental Health Wellness outpatient clinic, an outreach program for inner-city youth (see page 11), family therapy services, a hospital-wide consultation liaison psychiatry service and four in-patient wards with 60 beds, which are full every day.



#### **NEED FOR RENEWAL**

According to current plans to redevelop the hospital, St. Paul's Mental Health outpatient clinics are slated to move to a yet-to-be-built tower after its projected opening in 2017. The goal for inpatients is to move beds into St. Paul's Providence Building, providing patients with a safer, larger and seismically sound space with an adequate number of private rooms, a secure place to get fresh air and a more efficient layout. Until then, many of the program's in-patient beds will remain located in the 100-year-old Burrard Building.

"We are the only program in the hospital that still has in-patients here," says Duff. "It is not the best space to care for patients who are struggling with issues such as depression and anxiety."

While it will be some time before the Mental Health Program moves into new facilities, there is opportunity now for donors to make a difference. Gifts of small, every-day things such as art supplies and magazine subscriptions, or exercise equipment to provide patients with healthy and meaningful activities, can make a huge difference to patients' lives.

#### **CHAMPIONING A CAUSE**

Thullner can speak first-hand on the difference St. Paul's Hospital makes in the lives of patients affected by HIV/AIDS and mental health issues.



#### A "BRILLIANT" IDEA

Last year, Dean Thullner decided to give back to St. Paul's by orchestrating a fundraising gala with proceeds benefitting the hospital. The result was brilliant!, an epic volunteerand community-driven fashion show and silent auction co-hosted by Margaret Trudeau.

"It was the easiest project I've ever taken on," says Thullner. "Everyone I talked to had a story about themselves or their wife or their husband and what St. Paul's did for them. They all said, 'I'll give you whatever you need.'"

The second annual brilliant! gala will raise funds to help St. Paul's support people with mental health issues and people with HIV. The event will feature a "Fashion Through the Ages" runway show, to be held in Vancouver's Commodore Ballroom in September 2013.

If you are interested in attending or supporting brilliant!, visit www.helpstpauls.com.

"Today, fewer people with HIV are being shunned and more people are coping and having relationships – and that's all because of St. Paul's removing the stigma and actually digging into what's happening," he says. "If St. Paul's can continue to do for mental health what it has done for HIV, then Canada is

going to be a much better place."■

To find out how you can support the Mental Health Program at St. Paul's Hospital, please contact St. Paul's Hospital Foundation at 604-682-8206 or visit www.helpstpauls.com.



# Reaching Out

A \$1.6 million donation from Silver Wheaton will allow St. Paul's Inner City Youth Mental Health Program to expand its services for at-risk youth.

#### By Melissa Edwards

wo years ago, Lee Johnson knew little but turmoil: homeless and estranged from her family, she struggled with an undiagnosed mental illness and self-harming impulses. Eventually, depression and unhealthy relationships pulled her into a crystal methamphetamine addiction and other self-destructive behaviours.

"You feel awful; you stay up for days," remembers Johnson. "I thought, 'there has to be something bigger than this."

Thankfully, Johnson finally received the help she so desperately needed from a psychiatrist working with St. Paul's Hospital's Inner City Youth Mental Health Program (ICYMHP). The program changed her life.

#### A BRIGHTER FUTURE

The psychiatrist diagnosed Johnson with borderline personality disorder and quickly provided the appropriate therapy. ICYMHP taught her new coping skills and found her housing. Slowly, Johnson began to realize that a better life was possible.

"It was hard to kick the addiction," she says. "But now I have the ability to choose what is important."

ICYMHP has been helping street-affected youth like Johnson since 2007, when St. Paul's psychiatrists Drs. Steve Mathias and Bill MacEwan launched the outreach program. ICYMHP, in partnership with community organizations such as Covenant House Vancouver and Coast Mental Health, delivers mental health and psychiatric outreach services, health education, physician and nursing care, life-skills guidance and secured housing to homeless youth at agencies throughout Vancouver.

"We focus on being consistent and providing clear boundaries, but also on being compassionate and empathetic," says Mathias, who adds that many of the youth have mental illnesses complicated by learning disabilities, trauma, distrust and neurocognitive problems.

#### INNER CITY YOUTH MENTAL HEALTH PROGRAM - LEAD DONOR SILVER WHEATON

ICYMHP recently received a \$1.6-million donation from silver streaming company Silver Wheaton to help it expand its services in Vancouver's Downtown Eastside (DTES).

"Silver Wheaton is committed to giving back to the communities where it lives and does business," says Randy Smallwood, president and CEO of Silver Wheaton. "With headquarters located near both St. Paul's Hospital and Vancouver's Downtown East-side, we saw the pressing need to expand this program to help youth in Canada's poorest neighbourhood."

Silver Wheaton's donation will provide three years of funding for a sizable expansion of the ICYMHP to hire more staff to support youth in the DTES. Staff will be given specialized training to help them address the unique complexities of homeless youthin the DTES, who also face the added pressures of the ever-present drug and sex trades.

"It's going to take specialized care to help these youth break free from this environment," says Mathias. "Hopefully, we'll start to see youth transition out of the DTES and not become entrenched."

#### **SEEING RESULTS**

Johnson is happy to know ICYMHP's reach is growing. Today, she is healthy and earning a diploma in Travel and Tourism Business Management. Now that she has hope, Johnson says she wants to share it: "If they can unlock

that in some-one else, that's something amazing," she says. "I know there are more people like me out there – and now there's a better chance to reach them [through ICYMHP]."

To find out more about how you can support the ICYMHP at St. Paul's Hospital, please contact St. Paul's Hospital Foundation at 604-682-8206 or visit www.helpstpauls.com.



Photo: Brian Smith

# Meeting of the

A new partnership is enabling four of St. Paul's Hospital's brightest young researchers to drive innovation and conduct groundbreaking research on HIV/AIDS and a deadly lung disease.

#### By Nancy Gratham

edicine has been described as the only profession that constantly works to destroy all reason for its existence. This may be especially true of medical research, where doctors focus their energies on making new discoveries to help prevent, treat and cure disease.

The opportunity to conduct groundbreaking medical research, together with the funds needed to support that research, has long attracted many of the finest medical minds to St. Paul's Hospital. On that front, St. Paul's Hospital Foundation has entered a partnership with the Michael Smith Foundation for Health Research (MSFHR) and the Providence Health Care Research Institute (PHCRI) to support the work of new investigators – researchers in the intermediate stages of their careers who can play a key role in driving innovations in health care. The result of this partnership is the New Investigator Awards, awarded to the following researchers at St. Paul's Hospital who are poised to inspire dramatic global change.

#### HELPING COPD PATIENTS BREATHE EASIER

At the UBC James Hogg Research Centre at St. Paul's, which specializes in medical research related to the heart and lungs, Drs. Tillie-Louise Hackett and Jordan Guenette are exploring different aspects of a common interest – the study of chronic obstructive pulmonary disease (COPD). Close to three million Canadians currently live with COPD, a disease that is characterized by deadly "lung attacks" and is the fourth-leading cause of death worldwide.

Hackett is working to develop ways to better understand and diagnose the disease at a cellular and molecular level, using new micro X-ray imaging techniques and computed tomography (CT) scans to identify therapeutic strategies. For example, she is investigating the possibility that the decline in respiratory activity levels amongst baby boomers – who grew up when smoking rates were at their highest – may be due to underlying lung disease rather than aging. Through this research, Hackett may be able to detect damaged airways in patients with even mild COPD.

"This research will allow a better understanding of smoke-related airway disease by determining which subjects will develop progressive and/or life threatening disease," says Hackett. "If we do that, we can apply clinical interventions to change patient outcomes."

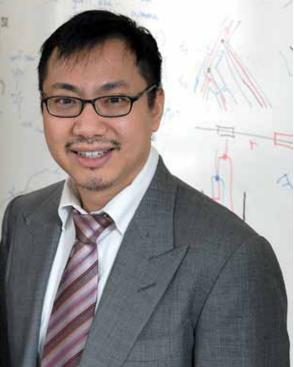
Guenette, on the other hand, is researching COPD from a physical rehabilitation perspective. His aim is to determine the physiological factors that cause shortness of breath and exercise intolerance in COPD patients and how to intervene in those factors to improve health and quality of life.

While not all therapies work for all patients, whole-body exercise training has been shown to help relieve shortness of breath in COPD patients, relieve fatigue and



# Minds





Dr. Jordan Guenette and Dr. Tillie-Louise Hackett (above left to right) are researching ways to improve the quality of life in patients with COPD; (below left to right) Dr. Kora DeBeck and Dr. Art Poon are both conducting research that could help halt the transmission of HIV/AIDS.

enhance their sense of control over their illness. Guenette believes the right therapy may help to thwart the natural progression of respiratory disease: "For some respiratory patients, their symptoms are so debilitating and their quality of life is so poor, that we want to do everything we can to make that better."

#### FINDING WAYS TO STOP HIV/AIDS

Halting the transmission of disease is a familiar refrain at the BC Centre for Excellence in HIV/AIDS at St. Paul's. Here, researchers like Drs. Art Poon and Kora DeBeck have helped to generate world-renowned discoveries in HIV treatment and disease transmission prevention and to transform HIV infection from a death sentence to a manageable chronic condition.

Poon's research focuses on the evolution of HIV for which he makes extensive use of bioinformatics – a field of study about how to store, retrieve, organize and analyze biological data. In this case, Poon uses bioinformatics to create computational tools that are used to extract information from massive amounts of HIV genetic sequence data. For example, Poon has developed a technique using genetic data that can reconstruct when a person became infected with HIV, which is critical for tracking the rate of new HIV infections over time. Poon's research will also include the development of a system to monitor HIV transmission rates and resistance to anti-HIV drug therapies in real time – a process Poon calls "a critical step for knowledge translation between bioinformatics and public health."

DeBeck's research focuses on disease transmission and drug-related harm among street-involved youth. DeBeck is an expert in public policy who is committed to working with policy-makers to ensure important scientific findings – such as protocols to prevent HIV transmission - are put into practice. Her post-doctoral work has involved looking at the global impact of drug criminalization on HIV prevention among people who use injection drugs.

DeBeck's latest undertaking – a program that will address the combined crisis of drug addiction and infectious diseases among street-involved youth – is a natural segue. Her research will study the transmission dynamics of hepatitis C and evaluate current treatment strategies for this underserved population. She'll also explore novel addiction treatments and how individual, social, structural and environmental factors can create environments that put these populations at risk.

"Serving the young, addicted population remains a major challenge for care providers," admits DeBeck. Thanks to her new research and the funding that makes it possible, that challenge can finally be met. ■

St. Paul's Hospital Foundation is raising \$1 million to support the work of the New Investigators, with matching funding provided by PHCRI (for Drs. Guenette and Hackett) and MSFHR (for Drs. DeBeck and Poon). To learn how to support research at St. Paul's Hospital, please contact St. Paul's Hospital Foundation at 604-682-8206 or visit www.helpstpauls.com.

## The Culture of Heart

St. Paul's takes the influence of cultural beliefs on health care to heart.

By Helena Bryan



A heart transplant gave Samuel Lee, pictured here with his wife Anita and their twin grandsons, a new lease on life; (above right) Dr. Nadia Khan.

hen Samuel Lee was referred to a heart specialist because of persistent fatigue and shortness of breath, his wife, Anita, had no idea how sick he was. "He didn't want me to worry," she recalls, holding back tears.

By the time Lee met with cardiologist Dr. Mustafa Toma at the provincial Heart Centre at St. Paul's Hospital, he could barely walk half a block without needing to rest. Although Lee didn't appear that sick, he

eventually required a heart transplant. "Most people with his condition would have had more complaints and looked a lot worse," says Toma.

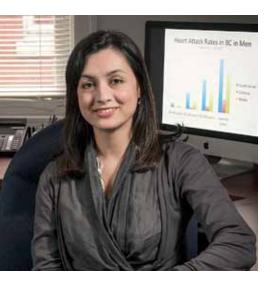
#### **ENDING THE SILENCE**

Lee's situation is a familiar one, says Dr. Nadia Khan, a research scientist at St. Paul's Centre for Health Evaluation and Outcome Sciences. Khan is an expert on the role of ethnicity in cardiovascular disease, particularly in South Asian and Chinese populations.

Khan says that Lee's initial reluctance to talk about his illness is not uncommon among Asian people. For heart health programs to be truly effective, she says, practitioners must understand how cultural diversities can stand in the way of delivering optimal heart health care.

The need to address these diversities is the impetus behind a potentially life-saving initiative called the Program for Improving and Preventing Cardiovascular Disease in South Asian and Chinese Populations. The

## Disease



program is conducting research to answer some of the perplexing questions around heart disease management within the South Asian and ethnic Chinese communities.

Khan hopes that this research will allow her and her team to identify and better understand the health-care barriers within these two groups. She also hopes it will provide insight into the influence of cultural beliefs around critical heart-health behaviours, such as exercise and the use of medications. Ultimately, the goal is to use this information to create more effective evidence-based and culturally sensitive heart-health programs.

#### **BRIDGING BELIEFS**

"We know that the barriers [to the delivery of health care among South Asian and Chinese populations] are not just about language," says Khan. "People of Chinese descent tend not to want to talk about a disease they don't have because it's bad luck, so simply handing out a brochure about heart disease in Chinese isn't going to solve that reluctance."

Research shows that other factors must be considered to help patients like Lee, who must carefully manage their condition for the rest of their lives.

"Chinese and South Asian patients are less likely than other patients to continue taking life-saving medications after a heart attack," she adds. "Whether this is also true for heart transplant patients needs to be studied, as they won't survive without the transplant drugs. If we understand why this group is less likely to take medicine, then we can find ways to help them better manage their heart disease."

#### SIGNIFICANT NUMBERS

Lee is one of the approximately 20 patients per year to get a heart transplant at St. Paul's, the only hospital in B.C. to perform these transplants for adults. Of these patients, 20 per cent are of Asian or South Asian descent, a statistic that reinforces the importance of Khan's research into the influence of culture on the delivery of health care.

Happily, Lee's post-transplant recovery has gone very well because he has bucked many of the cultural trends described by Khan's research.

"He's followed through on all of our advice, taken his meds and made sure he's been here for regular biopsies to monitor the health of his new heart," says Toma.

#### GIFT OF GRATITUDE

Anita Lee, an accomplished opera singer, will perform at two benefit events in appreciation of the help the Lees received at St. Paul's - a Cantonese Opera at the Michael J. Fox Theatre in Burnaby on July 27 and a gala fundraising dinner at the Continental Chinese Seafood Restaurant in Richmond on July 28. If you are interested in attending, please visit www.helpstpauls.com for more information.

Without his new heart and the expertise of St. Paul's transplant team, Lee says he knows that he wouldn't be here today to enjoy his twin three-year-old grandchildren. And for that, Lee and his wife Anita are forever grateful. ■

To find out more about how you can support heart care and research, please contact St. Paul's Hospital Foundation at 604-682-8206 or visit www.helpstpauls.com.

#### **HEART HEALTH - THE ASIAN EQUATION**

Here are some of the different ways South Asian and Chinese populations experience heart attacks as compared to Caucasian populations.

South Asians under

years of age have twice the rate of heart attacks as compared to Caucasians and

times the rate of heart attacks as compared to Chinese individuals.

patients experience chest pain when they are having a heart attack, compared to

of Chinese patients and

of South Asian patients.

patients don't go to the ER within 12 hours after a heart attack, compared to

**47%** of South Asian patients and

27% of Caucasian



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