

## Three BC doctors awarded Order of BC

Three BC physicians were among the group of 16 civic leaders appointed to the Order of British Columbia, the province's highest honor. The Order of BC recognizes persons who have served with distinction and excelled in any field of endeavor to benefit the people of the province or elsewhere.

### Dr Allen Eaves

Dr Eaves is a leukemia specialist and founder-owner of Vancouver's STEMCELL Technologies Inc., the largest biotechnology company in Canada. Dr Eaves also founded the Terry Fox Laboratory and was its director for 25 years, and served on the board and as chair of Mitacs—a non-profit, national research organization.

### Dr Peter K.K. Wong

Dr Wong is a community leader, businessman, philanthropist, and physi-

cian who serves a large number of patients with multicultural backgrounds in Vancouver. In addition to his medical practice, Dr Wong has been an advocate for strong trade relations with China, participating in a number of trade missions with all levels of government and serving as a special advisor to the Musqueam Nation for Asia-Pacific affairs.

### Dr Eric M. Yoshida

Dr Yoshida is recognized for his clinical care and research excellence in liver disease. Formerly medical director of the BC Liver Transplant Program, Dr Yoshida's work enabled patients with hepatitis B to have successful liver transplants, and he established the first program in Canada to provide HIV patients with the right to be allowed liver transplantation. Dr Yoshida built a centre for excellence in liver disease that provides treatment, research, education, and collab-

oration with the medical community and the citizens of British Columbia, and created a clinical research centre in hepatitis and liver disease.

Congratulations, Drs Yoshida, Eaves and Wong.

## Dr Michael Klein appointed to the Order of Canada

Dr Michael Klein has been appointed as a Member of the Order of Canada. Recognized for his sustained contributions to integrating family medicine and maternity care in Canada, Dr Klein is one of 113 recipients who earned the honor this year. Dr Klein fled to Canada in 1967 after refusing to serve as an officer in the US Army Medical Corps during the Vietnam War and became a family physician, pediatrician, leading researcher in maternity care, and emeritus professor in UBC's Department of Family Practice and Pediatrics. The Col-



### Farewell to Dr Susan Haigh

After 22 years Dr Susan Haigh is leaving the *BCMJ* Editorial Board. Susan joined the Board in 1994, marking the first year it had more than one female member. Susan represented multiple constituencies during her time on the Editorial Board, including female physicians, medical specialists, regional urban practitioners, and (of course) endocrinologists. In doing so she always produced practical, sensitive, and commonsense opinions, and her presence at Board meetings will be greatly missed. Susan spoke and wrote eloquently on behalf of patients and office support staff, showing the kind of person she is.

We wish her well as she heads toward retirement, and we are all grateful to her for her many contributions. Hopefully she will soon have time to make her long-planned trip to rediscover her African roots!

—*BCMJ* Editorial Board



### Welcome Dr Jeevyn Chahal

We would like to extend a warm welcome to Dr Jeevyn Chahal, the *BCMJ* Editorial Board's newest member. Dr Chahal joined the Board on 1 July 2016.

Born in Kamloops, Dr Chahal completed her BSc in pharmacology at UBC and her MD and CCFP at the University of Saskatchewan. Following graduation she moved back to Kamloops to run a busy solo family practice. Dr Chahal shares her home with three dogs, one cat, a baby girl, and her husband. She enjoys spending time with her and her husband's amazing families and wonderful friends, tending to her hobby farm—which includes chickens—pursuing photography, running, and hiking.

—*BCMJ* Editorial Board

lege of Family Physicians of Canada named him as one of the Top 20 Pioneers of Family Medicine Research in Canada for his research in childbirth and maternal health, and his work on routine episiotomies. His landmark episiotomy study, “Does episiotomy prevent perineal trauma and pelvic floor relaxation? First North American trial of episiotomy,” was selected as one of the “ten most notable family medicine research studies in Canada” by the College of Family Physicians of Canada.

Congratulations, Dr Klein.

### Reminder: Apply for 2016–17 benefits under the Parental Leave Program

Are you a physician practising medicine in British Columbia? Are you or your spouse having or adopting a baby or planning a pregnancy between 1 April 2016 and 31 March 2017?

If so, it is important to take advantage of the Parental Leave Program, one of the negotiated benefits administered by Doctors of BC. In addition to pregnancy benefits for female physicians, the program provides parental benefits for male physicians and adoptive parents. Benefits are payable for up to 17 weeks at the rate of 50% of eligible income up to a maximum of \$1000 per week.

For more information or an application package, contact Lorie Lynch at 604 638-2882 or [llynch@doctorsofbc.ca](mailto:llynch@doctorsofbc.ca), or Ann Marie O’Driscoll at 604 638-2865 or [aodriscoll@doctorsofbc.ca](mailto:aodriscoll@doctorsofbc.ca).

### Did you know?

Within the last year family doctors have participated in more than 3400 PSP service offerings. To learn more about how the Practice Support Program’s suite of services can help doctors build capacity in their practices, visit [www.pspbc.ca](http://www.pspbc.ca).

### Canadian Blood Services reduces restrictions for blood donation

Thousands more people may now be eligible to donate blood following recent changes to a number of Canadian Blood Services deferral policies and donor restrictions. The following notable changes are now in effect across Canada:

- The upper age limit for donating has been eliminated. Donors over the age of 71 no longer need to have their physician fill out an assessment form before donating blood.
- Donors who have a history of most cancers (e.g., breast cancer, thyroid cancer, prostate cancer) will be eligible to donate if they have been cancer free for 5 years. This change does not apply to those with a history of hematological cancers (e.g., lymphomas, leukemia, melanoma).
- Donors who have recently received most vaccines, such as a flu shot, will no longer need to wait 2 days before donating blood.
- Donors who were born in or lived in some African countries (Central African Republic, Chad, Congo, Equatorial Guinea, Gabon, Niger, and Nigeria) are now eligible to donate blood. HIV testing performed on blood donors can now detect HIV strains found in these countries.
- Geographic deferrals affecting Western Europe have been revised based on scientific evidence that indicates the risk of variant Creutzfeldt-Jakob disease has decreased since January 2008. Donors who spent 5 years or more in Western Europe since 1980 are deferred from donating blood, but Canadian Blood Services is now including an end date of 2007. Donors who reached the 5-year limit in Western Europe after 2007 will now be eligible to donate blood.

The complete policy changes are available at [www.blood.ca/en/blood/recent-changes-donation-criteria](http://www.blood.ca/en/blood/recent-changes-donation-criteria).

*Continued on page 404*

### Doctors of BC 2017 awards: Seeking nominations

Doctors of BC is calling for nominations of members in good standing for either of the following 2017 awards.

#### Don B. Rix Award for Physician Leadership

Candidates for this award may have achieved distinction in areas such as:

- Supporting lifelong learning opportunities.
- Promoting excellence in medical education.
- Providing leadership for new initiatives both in business and clinical practice.
- Providing leadership and service to the general community or province either by direct support or through philanthropy.
- Building consensus among physicians and groups of physicians.

#### Doctors of BC Silver Medal of Service

Criteria for nominees include any of the following:

- Long and distinguished service to Doctors of BC
- Outstanding contributions to medicine or medical/political involvement in British Columbia or Canada.
- Outstanding contributions by a layperson to medicine or to the welfare of the people of British Columbia or Canada.

Closing date for nominations is 30 November 2016 at 11:59 p.m. For more information, visit [www.doctorsofbc.ca/resource-centre/awards-scholarships](http://www.doctorsofbc.ca/resource-centre/awards-scholarships).

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Continued from page 403

New donors who have never been screened can book an appointment online at <https://blood.ca/en/user/register>, call 1-888-2DONATE, or visit a clinic.

### First clinical guidelines in Canada for pain following spinal cord injury

Researchers at Lawson Health Research Institute in Ontario have developed clinical practice guidelines for managing neuropathic pain with patients who have experienced a spinal cord injury. The research team worked with care providers at Parkwood Institute, part of the St. Joseph's Health Care London family, and an international panel to address the unique challenges for managing pain during recovery and rehabilitation.

Dr Eldon Loh, Lawson researcher and physical medicine and rehabilitation specialist at St. Joseph's, and his team recognized that pain can be an overlooked part of a spinal cord injury and plays a major factor in the success of rehabilitation. The results of the 3-year process led to recommendations for screening and diagnosis, treatment, and models of care. Important clinical considerations accompany each recommendation. The research will inform new tools and resources for care providers and patients.

The new guidelines have been published in *Spinal Cord* and are

#### Doctors of BC Annual Report survey, winner

Congratulations to Dr Katharine McKeen of Victoria, winner of the Doctors of BC 2015–16 Annual Report survey contest. By completing a brief survey Dr McKeen was entered into the draw and won a free night at the Pan Pacific Vancouver, including breakfast for two in Oceans 999.

available online at [www.nature.com/sc/journal/v54/n1s/full/sc201688a.html](http://www.nature.com/sc/journal/v54/n1s/full/sc201688a.html).

The Ontario Neurotrauma Foundation and Rick Hansen Institute provided funding for the research study.

### Seniors with undiagnosed hearing loss can become isolated

UBC Okanagan researchers examined the impact of undiagnosed or untreated hearing issues in seniors age 60 to 69. The study found that for every 10-decibel drop in hearing sensitivity, the odds of social isolation increased by 52%. Among the sample of seniors, a 10-decibel reduction of hearing sensitivity was also associated with cognitive declines equivalent to almost 4 years of chronological aging.

Lead author Dr Paul Mick is a physician and clinical assistant professor at UBC's Southern Medical Program. The study examined data collected between 1999 and 2010 by the National Health and Nutrition Examination Survey, a survey that samples 5000 people each year across the United States. The survey examined demographic, socioeconomic, dietary, and health-related issues. Dr Mick would like to expand his research to see if interventions such as a hearing screening program similar to what is done for young children could positively impact health outcomes for Canadian seniors.

The study, "Is hearing loss associated with poorer health in older adults who might benefit from hearing screening?" was published in the May/June 2016 issue of *Ear and Hearing*.

### Depression screening tools not accurate for children and adolescents

According to new Canadian research, there is insufficient evidence to show that the various short questionnaires physicians use to ask about symptoms

of depression in children and adolescents accurately screen 6- to 18-year-olds for the disease. Researchers believe this calls into question the use of these assessment tools for this group and raises worries about possible misdiagnosis of the disease in this age range.

To assess the quality of the screening tools that are currently being used to identify depression in children or adolescents, researchers carried out a search of the medical evidence looking for studies that put the screening tools to the test. They identified only 17 studies where the test results from the screening tools were compared with results from a diagnostic interview to determine if the children or adolescents in the study actually had depression.

Lead author Dr Michelle Roseman, who is affiliated with the Jewish General Hospital's Lady Davis Institute for Medical Research in Montreal, and colleagues then assessed the methodology and results of these 17 studies. They found that most of the studies were too small to make a valid determination about the accuracy of the screening tools and that the methods of most studies fell short of expected standards. They also found that there was inadequate evidence to recommend any single cutoff score for any of the questionnaires. (Patients scoring above a pre-defined cutoff score are considered likely to be depressed, whereas patients below the cutoff are not.)

Researchers suggest that, given the inaccuracy of the tools currently being used, some children could end up mislabeled as depressed, and that large, well-designed studies that present results across a range of cutoff scores are needed to properly assess the accuracy of depression screening tools in children.

The study, "Accuracy of depression screening tools to detect major depression in children and adolescents:

*Continued on page 406*

Continued from page 404

A systematic review,” is published in the May 2016 issue of the *Canadian Journal of Psychiatry*.

The research was supported by the Canadian Institutes of Health Research, the Arthritis Society, the Mach-Gaensslen Foundation of Canada, and a Murray R. Stalker Primary Care Research Bursary.

**Middle-age memory decline a matter of changing focus**

According to a study by McGill University researchers, the inability to remember details that begins in early midlife (the 40s) may be the result of a change in what information the brain focuses on during memory formation and retrieval, rather than a decline in brain function.

Senior author Natasha Rajah, director of the Brain Imaging Centre at McGill University’s Douglas Institute and associate professor in McGill’s

Department of Psychiatry, identifies that a key question in current memory research concerns which changes to the aging brain are normal and which are not, and that most of the work on aging and memory has concentrated on understanding brain changes later in life. This research was aimed at addressing what happens at midlife in healthy aging and how this relates to findings in late life.

In the study, 112 healthy adults ranging in age from 19 to 76 years were shown a series of faces and were asked to recall where a particular face appeared on the screen (left or right) and when it appeared (least or most recently). Researchers then used functional MRI to analyze which parts of brain were activated during recall of these details.

Dr Rajah and colleagues found that young adults activated their visual cortex while successfully performing this task, while middle-aged and

older adults didn’t show the same level of visual cortex activation when they recalled the information. Instead, their medial prefrontal cortex was activated.

Even though middle-aged and older participants didn’t perform as well as younger ones in this experiment, Dr Rajah suggests that it may be wrong to regard the response of the middle-aged and older brains as impairment, but rather that it may reflect changes in what adults deem important information as they age. Researchers also concluded that middle-aged and older adults might improve their recall abilities by learning to focus on external rather than internal information.

Dr Rajah is currently analyzing data from a similar study to discern if there are any gender differences in middle-aged brain function as it relates to memory, noting that women go through a lot of hormonal change at midlife. The question is, how much of these results is driven by post-menopausal women?

The study, “Changes in the modulation of brain activity during context encoding vs. context retrieval across the adult lifespan,” was published in the October 2016 issue of *Neuro-Image*.

This research was supported by the Canadian Institutes of Health Research and by a grant from the Alzheimer’s Society of Canada.

**Half of patients with depression are inadequately treated**

UBC research shows that about 50% of British Columbians with depression are not receiving the basic level of care, and authors say the findings highlight the challenges of accessing mental health services across Canada.

It is estimated that 1 in 20 people experience depression each year. Joseph Puyat, a PhD candidate in UBC’s School of Population and Public Health and a research methodologist at the Centre for Health



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Evaluation and Outcome Sciences, and his colleagues reviewed health data from almost 110 000 British Columbians diagnosed with depression by physicians between 2010 and 2011, and examined whether these individuals received either one of the two recommended treatment options: antidepressants or psychotherapy. They found that only 13% of people received at least four psychotherapy or counseling sessions and 47% received antidepressant medication for at least 12 weeks. Overall, about 53% received the minimum threshold of treatment.

Researchers believe that their findings underestimate the full extent of the problem since many people do not seek or receive a diagnosis for their depression because of issues around stigma or access to a physician. Mr Puyat compared these findings to results from the Statistics Canada 2012 Canadian Community Health Survey and found that the BC data are comparable. In the national survey, 4 out of 10 Canadians who struggle with depression indicate they are not accessing any services to treat depression. He suggests that provinces need to look at the services covered for mental health and how patients access care (e.g., Canadians only receive public health coverage for counseling from medical doctors, yet many family physicians don't have the time or training to provide counseling services).

The study, "How often do individuals with major depression receive minimally adequate treatment? A population-based, data linkage study," was published in the July 2016 issue of the *Canadian Journal of Psychiatry*.

### Scientists develop microneedle system to monitor drugs

Researchers at UBC and the Paul Scherrer Institut (PSI) in Switzerland have created a microneedle drug-

monitoring system that could one day replace blood draws and improve patient comfort. The system consists of a small thin patch that is pressed against a patient's arm during medical treatment and measures drugs in the bloodstream painlessly without drawing any blood. The tiny needle-like projection, less than 0.5 mm long, resembles a hollow cone and doesn't pierce the skin like a standard hypodermic needle.

Researcher Sahan Ranamukhaarachchi, a PhD student and Vanier scholar in UBC's Faculties of Applied Science and Pharmaceutical Sciences, developed this technology during a research exchange at PSI. Microneedles are designed to puncture the outer layer of skin, but not the next layers of epidermis and the dermis, which house nerves, blood vessels, and active immune cells.

The microneedle created by Mr Ranamukhaarachchi and his colleagues was developed to monitor the antibiotic vancomycin, which is used to treat serious infections and is administered through an intravenous line. Patients taking the antibiotic undergo three to four blood draws per day and need to be closely monitored because vancomycin can cause life-threatening toxic side effects. Researchers discovered that they could use the fluid found just below the outer layer of skin, instead of blood, to monitor levels of vancomycin in the bloodstream. The microneedle collects less than a millionth of a millilitre of fluid, and a reaction occurs on the inside of the microneedle that researchers can detect using an optical sensor. This technique allows researchers to quickly determine the concentration of vancomycin.

The microneedle monitoring system is described in a paper published in the July 2016 issue of *Scientific Reports*, "Integrated hollow microneedle-optofluidic biosensor for therapeutic drug monitoring in sub-nanoliter volumes."

### Correction: Dr Erik Paterson, 1941–2016

Dr Paterson's year of graduation from the University of Glasgow School of Medicine was incorrectly listed as 1960 in the In Memoriam piece published in the *BCMJ* [2016;58:319-320]. Dr Paterson graduated from medical school in 1966.

### Canadian technology uses speech to track Alzheimer disease

A new technology that analyzes a person's natural speech to detect and monitor Alzheimer disease and other cognitive disorders won the AGEWELL Pitch Competition: Technology to Support People with Dementia. The tablet-based assessment tool records short samples of a person's speech as they describe a picture on the screen and extracts hundreds of variables from the samples.

Because of word-finding difficulties, people with Alzheimer disease will tend to pause more between words and the complexity of their vocabulary is reduced. The technology uses artificial intelligence to analyze about 400 variables, such as pitch, tone, prosody (rhythm), and rate of speech, as well as pauses and choice of words. In the laboratory, the software can reliably identify Alzheimer disease, Parkinson disease, and aphasia with between 85% and 100% accuracy.

Researchers are set to begin field tests in assisted living and home care settings. The tool will be used in seniors' facilities to improve ongoing monitoring of residents' cognitive health, provide family members with quantifiable updates, and help people plan when it's time to transition to a higher level of care.

Liam Kaufman, CEO and co-founder of Winterlight Labs, developed the tool with Dr Frank Rudzicz, Maria Yancheva, and Katie Fraser of the University of Toronto. Dr

*Continued on page 409*

greater future use of vaccines in pregnancy beyond influenza, including for prevention of pertussis, group B streptococcal disease, and respiratory syncytial virus infections.

—**Monika Naus, MD, MHSc, FRCPC**

**Medical Director, Immunization Programs and Vaccine Preventable Diseases Service**

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*Continued from page 407*

Rudzicz is also a scientist at Toronto Rehab-University Health Network. Regulatory approval will be sought in Canada and the United States to make the technology available to family doctors and speech-language pathologists.

Ten teams from Canada and around the world competed in the AGE-WELL Pitch Competition, which showcased a variety of technology solutions that address the challenges faced by people living with dementia.