Aging gracefully? Well, maybe

by Bill Fairbairn

joined the Canadian Longitudinal Study on Aging. I was among the army of volunteers who were accepted. I took health tests at the Elizabeth Bruyere Research Institute in Ottawa (Unlocking the mysteries of aging, Riverview Park Review, Feb, 2, 2013).

I passed normal in waist to hip o date 51352 seniors have ratio, blood pressure, lung capacity, bone mineral density and eyesight and only slightly below normal in hearing, Today, three years later, my 80 years have begun to catch up on me. I feel older. That's life, I suppose. However, it's gratifying to know that Canada is ex-

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A tour of the Biorepository and Bioanalysis Centre was part of the event held at the CLSA National Coordinating Centre in Hamilton, ON, when the federal government officially recognized the accomplishments of the CLSA. Photo credit:courtesy of CLSA

850 Industrial Ave, Unit 3

Get W.I.T.H. It

nce again this year The Ottawa Hospital Academic Family Health Team will be leading the Heart Wise Exercise walking program at Hillcrest High School 1900 Dauphin Road Ottawa starting November 2nd. Come join us and walk the halls in a safe, warm and friendly environment. (Get W.I.T.H. It) . This free program which meets the criteria of a Heart Wise Exercise program is endorsed by The University of Ottawa Heart Institute and The Ottawa Hospital. You are free to drop in for a light (no stairs - wheelchair

and stroller friendly), moderate or vigorous walking route and have fun flexing your muscles at "Muscle Moment" stations every Monday and Wednesday from 6:00-8:00pm from November 2nd 2015 until March 23rd 2016. Remember to bring comfortable walking shoes and a water bottle. Pedometers and enthusiastic volunteers will be there to help track your progress and guide you. If you'd like to know more please contact Kim Lavender at 613-798-5555 ext. 13512 or by email klavender@tob.on.ca



Just some of the first evening's happy participants stopping for a break Photo credit:Carole Moult



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like I had the flu for a couple of days, and the symptoms were easily managed," said Ms. Monker. "It is too soon to know if I may have benefited from this therapy, but I'm very glad to contribute to this important research that could improve care for others."

The idea of using viruses to treat cancer has been around for more than a century, with sporadic reports of cancer patients experiencing remarkable recoveries after viral infections. However, it is only in recent years that viral therapy has begun to be developed and tested in a rigorous way. Drs. Bell, Lichty and Stojdl began investigating viral therapies for cancer nearly 15 years ago when they worked together at The Ottawa Hospital.

"We found that when normal cells become cancerous, it's like they are making a deal with the devil," explained Dr. Bell, a senior scientist at The Ottawa Hospital and professor at the University of Ottawa. "They acquire genetic mutations that allow them to grow very quickly, but these same mutations also make them more susceptible to viruses." The two viruses being tested in this clinical trial are called MG1MA3 and AdMA3. MG-1MA3 is derived from a virus called Maraba, which was first isolated from Brazilian sandflies, while AdMA3 is derived from a common cold virus called Adenovirus.

Both of these viruses have been engineered to stimulate an immune response against cancer cells that express a protein called MAGE-A₃, but the Maraba virus also achieves an extra layer of anti-cancer activity by replicating inside many kinds of cancer cells and killing them directly. These viruses are manufactured in specialized facilities at The Ottawa Hospital and Mc-Master University.

"The idea behind this trial is to use the Adenovirus to prime the patient's immune system to recognize their cancer, and then use the Maraba virus to directly kill their cancer and further stimulate their immune system to prevent the cancer coming back," said Dr. Brian Lichty, associate professor at McMaster University. "We're enthusiastic about the potential of this unique therapy."

"We're very excited about this first clinical trial," said Dr. Stojdl, senior scientist at the Children's Hospital of Eastern Ontario and associate professor at the University of Ottawa. "We're continuing to push very hard to develop a suite of biological therapies with the goal of launching similar trials tailored to other types of tumours, including brain cancer and several devastating childhood cancers."

Growing field

Viral therapies are one component of a growing field of cancer research that seeks to use biological materials (including cells, genes, antibodies and viruses) to attack cancer cells and stimulate an anticancer immune response. This field of research has been called biotherapy or immunotherapy.

Dr. Bell and his colleagues recently launched the \$60M BioCanRx network to advance this area of research. The Maraba virus is an important part of a broad biotherapeutics clinical trial development program in Canada that

is combining viruses and vaccines with standard and emerging therapies to treat different types of tumours. Drs. Lichty, Bell and Stojdl and their institutions, in cooperation with the Fight Against Cancer Innovation Trust, have formed Turnstone Biologics in order to engage the private sector and to help fund further clinical trials.

"Immunotherapy is a very exciting field of cancer research, with antibody-based therapies showing the most promise in clinical trials so far," said Dr. Derek Jonker, the overall lead for the clinical trial, a medical oncologist at The Ottawa Hospital and a professor at the University of Ottawa. "Viral therapies have also shown promise in laboratory studies, but it is too soon to know what impact they may have on patients. This clinical trial will help us find out and we're very grateful to the patients who have participated."

"Ontario is pleased to support innovative research through the Ontario Institute for Cancer Research," said Reza Moridi, Ontario Minister of Research and Innovation. "Our investments have enabled our researchers to be at the forefront of this new therapy. Immunotherapy has the potential to vastly improve the way cancer is treated, and is another example of how research investment brings tangible benefits to Ontarians and people around the world."

"The NCIC Clinical Trials Group is very pleased to conduct this trial, which offers a potential new therapeutic approach for cancer patients that has been developed by Canadian researchers," said Dr. Janet Dancey, director, NCIC Clinical Trials Group and professor at Queen's University in Kingston.

"Our Government is committed to investing in research that will accelerate efforts to find a cure for cancer, a disease that kills thousands of Canadians each year. The clinical trial announced today represents an innovative approach to treating cancer.

Multiple effort

In addition to The Ottawa Hospital, the clinical trial is also taking place at the Juravinski Cancer Centre of Hamilton Health Sciences (under the leadership of Dr. Sebastien Hotte), Princess Margaret Cancer Centre of the University Health Network in Toronto (under the leadership of Dr. Albiruni R A Razak) and the Vancouver Centre of the BC Cancer Agency (under the leadership of Dr. Daniel Renouf). The trial was approved by Health Canada, the Ontario Cancer Research Ethics Board and the BC Cancer Agency Research Ethics Board. Further details about the trial are available at clinicaltrials.

While this trial is primarily funded by the Government of Ontario through the Ontario Institute for Cancer Research, many other funding organizations have also supported the research of Drs. Bell, Lichty and Stojdl, including The Ottawa Hospital Foundation, CHEO Foundation, Canadian Cancer Society, Terry Fox Research Institute, Canadian Institutes of Health Research, Ontario Ministry of Research and Innovation, Canada Foundation for Innovation, Ottawa Regional Cancer Foundation, Hair Donation Ottawa, Angels of Hope, BioCanRx, Pancreatic Cancer Canada, NAV Canada and several philanthropic donors.

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periencing a remarkable change in the make-up of its population with older people living longer than before.

An exciting announcement this past year was that the Canadian Institute of Health Research has provided \$41.6 million to allow CLSA to continue its work for the next five years and thus begin the second wave of full data collection to see what has changed in the past three years.

By 2036, nearly one in four Canadians will likely be 65 or older. Thus the CLSA study came at an important time hopefully allowing us to explore how differently we age and providing information on how we can best cope with the changes that come along with aging. In my case it is sore feet after a short walk, weaker legs that resulted in a soaking in the lake while boating and difficulty rising onto the jetty as well as dropping eyelids being attended to.

Then there is a tendency to shortness of breath and while gar-

dening, injuries that do not improve in the short term as they did in my youth.

To cope with this normal aging I pad my feet's high arches, Nordic walk in Balena Park, aqua train to strength muscles and curb my gardening.

CSLA leader Dr. Parminder Raina of McMaster University in Hamilton says: "Some people age in a healthy fashion despite many physical health challenges, while others who are in good physical shape age less optimally. What explains the phenomenon? Our study should answer questions that are relevant to decision mak-

ers to improve the health of Canadians."

A year ago then Federal Minister of Health Leona Aglukkaq said the study would create new science-related jobs as well as health benefits.

Some \$30 million initial support came from the Canadian government through the Canadian Institutes of Health Research and the Canada Foundation for Innovation. Other support is from the governments of Ontario, British Columbia, Alberta, Manitoba,

Quebec, Nova Scotia and Newfoundland and Labrador.

For 20 years the study was set to follow 50,000 Canadians, collecting information on their physical, emotional and social health functioning. It is anticipated that the information gained will lead to better programs, policies and services for Canada's aging population.

For my own part I expect a CSLA call soon for further tests to see if I am aging gracefully.



Brothers (from left) Mike, Terry and Patrick Hourigan from Burlington, ON, are all participants in the CLSA. *Photo credit:courtesy of CLSA*



A new Computer Assisted Telephone Interview site has opened at Simon Fraser University in B.C., where staff includes (from left) Laura Kadowaki, and supervisors Robert Hamilton and Nicole Pernat.

Photo credit:courtesy of CLSA