Innovation, creativity and collaboration are vital to our economy, and to our community. Centennial’s Applied Research and Innovation Centre catalyzes and accelerates business productivity and competitiveness. Find out how we can help your company grow – visit centennialcollege.ca/applied

ADVANCING CANADIAN HEALTH CARE

Highlighting the minds behind today’s life-changing innovations

Peace of mind
Canada safeguards intellectual property

Right to the point
Why vaccine research proves to be vital

RESEARCH EXCELLENCE

3
ELEMEHTS
OF A SUSTAINABLE HEALTH CARE SYSTEM

3 ELEMENTS
health research in Canada has an illustrious and internationally acclaimed track record.

Why should we care? Each one of us depends on health care that keeps us and our loved ones well, and saves or prolongs our lives. This care, on which we rely, does not spontaneously emerge. It comes from research. Today’s treatments are yesterday’s discoveries. We cannot afford not to care. Our health research enterprise is investing the future of the health care on which, our children and subsequent generations can rely. It works.

Our health research enterprise is enviable across the globe. Canadians enjoy a health care system that is world-class, with Canada being a not-so-delicate foot in the door to accessing medical care in international health systems. Canadians have access to a healthcare system that is first-rate thanks to vaccination efforts. Measles deaths worldwide have dropped 68 percent between 2000 and 2006 thanks to vaccination efforts, with Canada being a frontrunner. That makes Canada a model of what can be achieved.

We've achieved this gain in Canada, thanks to our government’s commitment to attracting scientists and building research infrastructure. However, we can’t win a race if we don’t have gasoline to fuel the cars. That’s the problem: we’re out of gas.

In the last ten years annual applications to federal agencies that fund health research have doubled, from 1,200 to almost 2,500. Investment in the work scientists do has not kept pace with that in infrastructure or attracting the best minds; rather, it looks like we’re not getting the results we paid for.

Why is this imbalance? Why are we not getting the results we paid for? How, then, to fix this imbalance? The answer is twofold.

First, we need a different business model. If we're not getting the best results we paid for, we need to rethink our model. We need a new approach to funding the work scientists are doing. Our scientists and their research are underfunded. If we don’t have gasoline to fuel the cars, we won’t be able to get to our destinations.

Theoretically this sounds simple, but it isn’t. For one thing, we don’t have gasoline to fuel the cars. Let’s face it, the fiscal imbalance is a real problem, and the problem is getting worse. Our government has to think differently about how to fund research.

Now, let’s temper this bad business model with some good news. We’ve made great strides with the human papilloma virus (HPV), meningitis, dengue fever and even HIV/AIDS, but there’s still a lot to be done.

The power of prevention

Vaccination and immunization prevent these million deaths around the world and there is hope that research may ultimately bear fruit for vaccines that can prevent various forms of cancer, the leading cause of early deaths in Canada.

When we talk about a cancer vaccine, what we mean is usually in a vaccine that stimulates the immune system to respond to cancer as being a foreign part of the body, so cells that cause cancer cells like they would any other virus or bacteria, Lavoie explains.

Natural barriers

Work continues on finding a way to augment natural barriers in the immune system to attack these cancerous cells. But vaccines and immunization efforts have worked well for pandemics like SARS and the H1N1 swine flu, says Dr. Peter Benoit, President of BioXperts Limited, a company devoted to vaccine research and development. "We’ve made great strides with the human papilloma virus (HPV), but the long game and even H1N1, but there’s still a lot to be done.

Our health research enterprise is inventing the future of health care on which we can rely.

Michael Adria, Ph.D

Our scientists and research community is excellent. Many people see our health care as something that should be duplicated.

Smart thinking for brain research advancements

In June, Finance Minister Jim Flaherty pledged up to $100 million in federal matched funding for a public-private partnership to advance brain research in Canada, a partnership led by the Brain Canada Foundation, a brain research organization dedicated to funding research on brain disorders at home and abroad.

Using a uniquely Canadian model of interdisciplinary, multi-institutional collaboration that has already produced important research breakthroughs in brain research, wherever possible, Brain Canada and its partners will partner with Voluntary Health Organizations, the Canadian Institutes of Health Research, provincial institutes, universities and research institutes, all with a view of maximizing the tremendous federal funding opportunity the federal government commitment has made possible. Brain Canada is the successor to the Canada Foundation, a national, charitable organization that develops multi-institutional research across the neuroscience.
A MARKED IMPROVEMENT ON DIAGNOSIS

Gordon Allan, 58, was born with a congenital heart defect that deteriorated sharply in his 40s, requiring him to undergo both a heart and a kidney transplant about 10 years ago.

However, it is not the surgeries that stand out in his mind as much as the numerous biopsies he had to endure, which he describes as “traumatic”: “The procedures are invasive and made an already stressful situation even more stressful,” he says. Equally overwhelming for him was the specialized equipment set-up and the number of healthcare professionals in the room for each biopsy.

While tissue biopsies may never be totally done away with, exciting new research is pointing the way to a gentler, more precise way of reading the body’s signals, according to doctors.

**Biological signposts**

Disease prediction or diagnosis often starts with a laboratory test that is usually applied to a blood, urine, saliva or tissue sample. However, the challenge is assessing the sample so sensitively and specifically that it truly reflects the key workings of a patient’s body, explains Dr. Bruce McManus, director of the Centre of Excellence for the Prevention of Organ Failure (PROOF Centre), based at St Paul’s Hospital.

“This is where biomarkers come in. A biomarker is a biological indicator that can be measured reliably, sensitively and specifically to detect or monitor changes in patient health,” says McManus. Examples of biomarkers are genes, proteins or other molecules.

A staggering amount of research is going into identifying improved, clinically relevant biomarkers, and this has intensified in the last decade. In the research units of B.C. universities and hospitals alone, at least $50 million has been deployed to investigate biomarkers. This figure does not take into account research efforts in the private sector.

**Not all transplants are problematic**

Contrary to popular opinion, not everybody rejects transplanted organs and not everybody rejects severely.

The PROOF Centre has been tasked with identifying the individuals who are susceptible to, are living with, or responding to, care strategies for immune rejection biomarkers in transplantation. These biomarkers are so sensitive that they can differentiate sharply between acute, reactivable rejection and its absence, says McManus.

Other markers can distinguish between those patients with longer term, insidious rejection and those without.

Such markers will be assessed for clinical value in B.C. beginning in January 2012.

**The ultimate goal**

Ultimately, better biomarkers will reduce the direct and indirect costs to patients and to society. “Multiply this effort across a myriad of diseases that cause heart, lung and kidney failure... it already has successfully identified immune rejection biomarkers in transplantation. These biomarkers are so sensitive that they can differentiate sharply between acute, reactivable rejection and its absence, says McManus.”

Other markers can distinguish between those patients with longer term, insidious rejection and those without.

Such markers will be assessed for clinical value in B.C. beginning in January 2012.

**The ultimate goal**

Ultimately, better biomarkers will reduce the direct and indirect costs to patients and to society. “Multiply this effort across a myriad of diseases that cause heart, lung and kidney failure... it already has successfully identified immune rejection biomarkers in transplantation. These biomarkers are so sensitive that they can differentiate sharply between acute, reactivable rejection and its absence, says McManus.”

Other markers can distinguish between those patients with longer term, insidious rejection and those without.

Such markers will be assessed for clinical value in B.C. beginning in January 2012.

**The ultimate goal**

Ultimately, better biomarkers will reduce the direct and indirect costs to patients and to society. “Multiply this effort across a myriad of diseases that cause heart, lung and kidney failure... it already has successfully identified immune rejection biomarkers in transplantation. These biomarkers are so sensitive that they can differentiate sharply between acute, reactivable rejection and its absence, says McManus.”

Other markers can distinguish between those patients with longer term, insidious rejection and those without.

Such markers will be assessed for clinical value in B.C. beginning in January 2012.

**The ultimate goal**

Ultimately, better biomarkers will reduce the direct and indirect costs to patients and to society. “Multiply this effort across a myriad of diseases that cause heart, lung and kidney failure... it already has successfully identified immune rejection biomarkers in transplantation. These biomarkers are so sensitive that they can differentiate sharply between acute, reactivable rejection and its absence, says McManus.”

Other markers can distinguish between those patients with longer term, insidious rejection and those without.

Such markers will be assessed for clinical value in B.C. beginning in January 2012.

**The ultimate goal**

Ultimately, better biomarkers will reduce the direct and indirect costs to patients and to society. “Multiply this effort across a myriad of diseases that cause heart, lung and kidney failure... it already has successfully identified immune rejection biomarkers in transplantation. These biomarkers are so sensitive that they can differentiate sharply between acute, reactivable rejection and its absence, says McManus.”

Other markers can distinguish between those patients with longer term, insidious rejection and those without.

Such markers will be assessed for clinical value in B.C. beginning in January 2012.
Canada’s health care system is envied world-wide—did you know that advancements over the past 75 years have increased the life expectancy of the average Canadian by 30 percent?

How we made it

If you’re Canadian, chances are somewhere within driving distance of your home is a pharmacy full of shelves lined with medicines. Have you ever thought about where these medicines come from?

Russell Williams, President of Canada’s Research-Based Pharmaceutical Companies (Rx&D) says innovation is the key. “It’s research and discovery. By bringing a new molecule from the lab to the patient, we create new medicines and vaccines, strengthen our health care and help ensure our prosperity.”

“Our scientists and research community is excellent. Many people see our healthcare as something that should be duplicated.”

“Innovative diabetes treatments are being helped by hospitalization reduced by 10 percent and HIV/AIDS hospitalization reduced by 5 percent. When it comes to life science research, innovation saves lives,” says Williams. “Research and innovation gives hope to Canadians.”

“If you go back 10 years and look at what medicines were available and look at it now, the improvement is astounding,” says Williams. “Our companies have discovered and developed the cutting-edge medicines, vaccines and diagnostics tools used today. Imagine the innovation and progress we will have in the next 10 years.”

For the past 100 years Rx&D has been operating as the voice for the life sciences industry. “Our companies have discovered and developed the cutting-edge medicines, vaccines and diagnostics tools used today,” says Williams. “Imagine the innovation and progress we will have in the next 10 years.”

Canada’s Research-Based Pharmaceutical Companies (Rx&D) says innovation is the key. “It’s research and discovery. By bringing a new molecule from the lab to the patient, we create new medicines and vaccines, strengthen our health care and help ensure our prosperity.”

“You scientists and research community is excellent. Many people see our healthcare as something that should be duplicated.”

“Innovative diabetes treatments have reduced hospitalization by 10 percent and HIV/AIDS hospitalization reduced by 5 percent. When it comes to life science research, innovation saves lives,” says Williams. “Research and innovation gives hope to Canadians.”

“The international competition for research dollars is fierce,” says Williams. “We must ensure Canadians have rapid access to innovative medicines and vaccines and adopt policies like competitive intellectual property protection that will encourage innovation and the development of the next generation of medicines. The next important step will be to include world class 20 within the Comprehensive Economic Trade Agreement with the European Economic Union.”

Williams says if we adopt the right choices we can be a world leader in health research. “Each year, the Life sciences industry invests approximately $100 billion in research annually if we can increase our share, we’ll not only generate medical discoveries which will save lives, but also provide opportunities for our young people by strengthening our hospitals, universities and research communities.”

“Canadians understand the value and the effectiveness of vaccines and new medicines,” he says. “They also understand that research is essential to a strong health care system and better health care outcomes.”

Feeling the effects

In late September, Nanos Research released a public opinion poll of 1000 Canadians about vaccine access and healthcare. The poll found that 85 percent of the respondents agree or somewhat agree that new medicines and vaccines improve patient’s quality of life.

Williams says the major challenge is getting the medicines from the idea stage to your pharmacy. The poll found that 85 percent of the respondents agree or somewhat agree that new medicines and vaccines improve patient’s quality of life.

Williams says the major challenge is getting the medicines from the idea stage to your pharmacy. “The recent International Report on Access to Medicines shows Canada lags behind other countries, ranking 23 out of 30 OECD countries in terms of access to the latest treatments,” says Williams. “We also have an approval process that takes longer than other countries.”

“Innovative diabetes treatments have reduced hospitalization by 10 percent and HIV/AIDS hospitalization reduced by 5 percent. ”

“Canadians understand the value and the effectiveness of vaccines and new medicines,” he says. “They also understand that research is essential to a strong health care system and better health care outcomes.”

Feeling the effects

In late September, Nanos Research released a public opinion poll of 1000 Canadians about vaccine access and healthcare. The poll found that 85 percent of the respondents agree or somewhat agree that new medicines and vaccines improve patient’s quality of life.

Williams says the major challenge is getting the medicines from the idea stage to your pharmacy. “The recent International Report on Access to Medicines shows Canada lags behind other countries, ranking 23 out of 30 OECD countries in terms of access to the latest treatments,” says Williams. “We also have an approval process that takes longer than other countries.”

“The international competition for research dollars is fierce,” says Williams. “We must ensure Canadians have rapid access to innovative medicines and vaccines and adopt policies like competitive intellectual property protection that will encourage innovation and the development of the next generation of medicines. The next important step will be to include world class 20 within the Comprehensive Economic Trade Agreement with the European Economic Union.”

Williams says if we adopt the right choices we can be a world leader in health research. “Each year, the Life sciences industry invests approximately $100 billion in research annually if we can increase our share, we’ll not only generate medical discoveries which will save lives, but also provide opportunities for our young people by strengthening our hospitals, universities and research communities.”

“Canadians understand the value and the effectiveness of vaccines and new medicines,” he says. “They also understand that research is essential to a strong health care system and better health care outcomes.”

Feeling the effects

In late September, Nanos Research released a public opinion poll of 1000 Canadians about vaccine access and healthcare. The poll found that 85 percent of the respondents agree or somewhat agree that new medicines and vaccines improve patient’s quality of life.

Williams says the major challenge is getting the medicines from the idea stage to your pharmacy. “The recent International Report on Access to Medicines shows Canada lags behind other countries, ranking 23 out of 30 OECD countries in terms of access to the latest treatments,” says Williams. “We also have an approval process that takes longer than other countries.”

“The international competition for research dollars is fierce,” says Williams. “We must ensure Canadians have rapid access to innovative medicines and vaccines and adopt policies like competitive intellectual property protection that will encourage innovation and the development of the next generation of medicines. The next important step will be to include world class 20 within the Comprehensive Economic Trade Agreement with the European Economic Union.”

Williams says if we adopt the right choices we can be a world leader in health research. “Each year, the Life sciences industry invests approximately $100 billion in research annually if we can increase our share, we’ll not only generate medical discoveries which will save lives, but also provide opportunities for our young people by strengthening our hospitals, universities and research communities.”
A new era

E-health will completely change healthcare. It is one of the fastest-growing fields of healthcare today.

PHOTO: MARTIN DEE

Parkinson’s…

A degenerative brain disease.

If you or someone you know has Parkinson’s, we can help. Online. On the phone. Or in person.

Research has shown that staying physically active is important to managing Parkinson’s symptoms. Call 1-800-565-3000 today and mention this ad to receive your FREE guide to Exercises for People with Parkinson’s.

Parkinson’s Society Canada

Société Parkinson Canada

1-800-565-3000  parkinson.ca

Scan this code with your smartphone to download more free resources from parkinson.ca.

The art of medicine

Despite the initial start-up issues in EMR, great strides have been made in electronic medicine. E-health is a very broad term, covering data collection and storage via EMR in the doctors’ offices, hospital electronic records, or a patient’s personal health record. Telehealth (the actual delivery of a medical service) and knowledge management. The last refers to the analysis of health data to guide medical decision making, explains Dr. Kendall Ho, the director of the e-Health Strategy Office at the Faculty of Medicine, University of British Columbia.

E-health is not new—BC emergency room doctors have relied on Pharmanet, which tracks patients’ prescription history, for 20 years, points out Ho. The goal is now to capitalize on data collection and storage. This involves changing medical education. “Medical students today are using digital technologies,” Ho says. “We need to think about using it to enhance clinical acumen. We are talking about the art of e-medicine.”

Telehealth points the way

St Paul’s Hospital is trialling two web-based programs targeting heart patients in less urban settings. Each web program costs roughly $100,000 to develop, a boon to a financially stretched health system.

According to Dr. Scott Lear, chair of cardiovascular prevention research at St Paul’s Hospital, heart rehabilitation programs are usually based in large, urban hospitals. In 2004-05, St Paul’s decided to compress its heart disease rehabilitation program into a web-based program. Patients upload their weight, heart rate during and after exercise and blood pressure results into the program, and a nurse sends a message to the patient, providing feedback.

The general practitioner remains the lynchpin in the patient’s care plan, stresses Lear. So far, patient results have been “encouraging.”

IDRANI NADARAJAH
editorial@mediaplanet.com

TIP

Treating patients the e-health way

Electronic medical records (EMR), though promising to revolutionize medicine, still do not have a robust following in Canada.

Unlike New Zealand, where almost 100 percent of doctors are electronically connected, only a third of Canadian doctors use EMR. However, the figure is higher in B.C. —almost 60 percent. More than 90 percent of larger practices with at least six doctors have EMR, according to Jeremy Smith, program director at the Physician Information Technology Office (PITO), a $108 million partnership between the provincial government and the B.C. Medical Association to support and implement IT planning.

Cost has been an issue. Dr. Jeff Harris, of Port Coquitlam in the South Okanagan Valley, says that despite the B.C. government funding 75 percent of the EMR bill, it still cost his three-physician practice about $20,000 after the rebate. It took six months for the system to be integrated into the workflow, during which time patient volume fell by a quarter, despite doctors working longer hours. “We lost about $75,000 in revenue. The stress was massive,” recalls Harris.

Furthermore, laboratories, imaging clinics and hospitals need to be included in the electronic network as well. Hospitals have been notoriously slow to change their system, preferring the less expensive option of sending out paper reports to external doctors, according to Harris.

Cost has been an issue. Dr. Jeff Harris, of Port Coquitlam in the South Okanagan Valley, says that despite the B.C. government funding 75 percent of the EMR bill, it still cost his three-physician practice about $20,000 after the rebate. It took six months for the system to be integrated into the workflow, during which time patient volume fell by a quarter, despite doctors working longer hours. “We lost about $75,000 in revenue. The stress was massive,” recalls Harris.

Furthermore, laboratories, imaging clinics and hospitals need to be included in the electronic network as well. Hospitals have been notoriously slow to change their system, preferring the less expensive option of sending out paper reports to external doctors, according to Harris.

Unlike New Zealand, where almost 100 percent of doctors are electronically connected, only a third of Canadian doctors use EMR. However, the figure is higher in B.C. —almost 60 percent. More than 90 percent of larger practices with at least six doctors have EMR, according to Jeremy Smith, program director at the Physician Information Technology Office (PITO), a $108 million partnership between the provincial government and the B.C. Medical Association to support and implement IT planning.
The University of Saskatchewan's Vaccine and Infectious Disease Organization (VIDO) is setting the standard for research and development facilities around the world.

Part of the VIDO-InterVac facility's mandate is to train and educate students and they've been able to learn from groundbreaking work at the lab. Eight commercially available vaccines have been produced at VIDO-InterVac over the years, six of them were the first of their kind in the world, including one that protects against a strain of e-coli. People said there was absolutely no need for food safety vaccines, that there was no way to fill in the market place and it turns out they were wrong," says Potter.

Increased awareness

In fact, it was the higher visibility of potential contamination in the food chain, such as Mad Cow Disease (BSE), Bird flu and SARS, which prompted VIDO-InterVac in 2002 to seek the funds to build the new InterVac alternative. "We saw these sorts of things were on the horizon and thought we'd better get the capacity built to do something about them."

InterVac's new capacity includes a Level-three containment facility, the second of its kind in Canada. The $141-million InterVac facility was opened in September. It enables scientists to work safely with some of the most dangerous pathogens on Earth. At the moment, Potter says it has no equal, anywhere. "It is the most advanced facility in the world. No questions about it. But that will be short lived because the next one to be built will incorporate a lot of the things that we have done here."

Contributing to the country

VIDO-InterVac not only sets new standards for facilities— it also help Canada maintain its decades-long leadership in the development of life-saving vaccines. "Canada in the vaccine field has always punched well about its weight," says Potter. "If you look at the accomplishments over the years, from the work of Connaught laboratories in the polio vaccine development, to the National Research Council in meningococcal vaccines we've done phenomenal things on a global basis. What InterVac is going to do is take those to the next level. It will not only protect that competitive advantage we've had, but it will enhance it in the future to tackle those new targets that couldn't be done in our prior facility."

It will also increase the number of potential partnerships for VIDO-InterVac. InterVac is already one of the leading places where more new medicines and vaccines are developed to treat and prevent cancer, diabetes, Alzheimer's, heart disease and other conditions. And that's in addition to the thousands of new partnerships that we have put in place to leverage the investments made here.

Do you believe

that Canada can be a world leader in generating jobs and investment in life sciences and the knowledge economy?

To do this, we need Canada to be one of the leading places where more new medicines and vaccines are developed to treat and prevent cancer, diabetes, Alzheimer's, heart disease and other conditions.

We need better tools, including world-class intellectual property protection that can help us turn innovative ideas into the next generation of new life saving or life enhancing medicine.

These new cutting edge medicines will also help by reducing surgery, hospital visits and other health costs.

Canada is currently negotiating a comprehensive trade agreement with the European Union (EU) that would put us in the unique position of being the only country in the world to have favoured trading status with both the Europeans and the U.S.

An internationally competitive intellectual protection regime for Canada is part of the discussions. A deal with the EU will preserve and create jobs in life sciences and provide a $12 billion boost to the Canadian economy while increasing our bilateral trade by 20%.*

By opening the doors to innovation, we improve the quality of life of all Canadians.

www.protecthealthcare.ca


Bright mind driving the way

www.actiononinnovation.ca

We do.
The good news is the development of drugs that may slow the progression of Alzheimer's disease and their caregivers.

In Parkinson's in particular, "we're really starting to connect the dots," says Fon. "Ideas we had been thinking about for a long time are starting to make sense." New research has led to the discovery of drugs that may slow the progression of Parkinson's disease and their caregivers.

Connecting the dots with Parkinson's

Safeguarding Canada’s intellectual property

**Question:** What measures are necessary to safeguard Canada’s intellectual property and why is it being increasingly protected?

**Answer:** A new report by the Canadian Intellectual Property Council has outlined the true value of IP.

**Unless Canada upgrades its intellectual property (IP) protection laws soon, the country's pharmaceutical sector could be left behind in the competitive landscape for global investment in medical research and development, say industry leaders.**

Paul Lucas, chair of the Board for Canadian Pharmaceutical Association (CPA), and president and CEO of GlaxoSmithKline Inc. (GSK), notes the ongoing trade negotiations between Canada and the 27 countries of the European Union (EU) towards a Comprehensive Economic and Trade Agreement (CETA) as a unique opportunity to upgrade the current IP laws to match those of the EU, United States and Japan.

"If we don't seize this opportunity through the CETA negotiation to upgrade the IP laws, Canada will continue to be a laggard in key IP areas - namely in biotechnology, data, and software. The global technology sector will continue to be a laggard in the life sciences for years to come unless Canada upgrades its IP protection laws." (Ted Kritsonis, editorial@mediaplanet.com)

**What is the current state of IP protection in Canada?**

Canada's Research-Based Pharmaceutical industry leaders.

**Why is IP protection important?**

The value of IP is measured in the aggregate. From sticking together and becoming the nucleus of a company, IP provides a competitive advantage.

**Is IP protection sufficient to safeguard research?**

"We're really starting to connect the dots," says Fon. "Ideas we had been thinking about for a long time are starting to make sense." New research has led to the discovery of drugs that may slow the progression of Parkinson's disease and their caregivers.

**What measures are necessary to safeguard Canada’s intellectual property?**

Dr. Edward Ivin is an associate professor at the University of British Columbia and director of the McGill Parkinson and Institute of National Research for Parkinson Canada's Scientific and Strategic Programs. He is director of the Parkinson Institute and Director of the McGill Parkinson and Institute of National Research for Parkinson Canada's Scientific and Strategic Programs.

"If a certain form of dementia emerges not because the brain cells were destroyed experimentally, but as a side effect of everyday life, we're not interested in being competitive on the IP front."

The recent Ivin's research has managed to connect the dots in a remarkable new finding of drug to help those suffering from Parkinson's disease.

**What is the current state of IP protection in Canada?**

Canada's Research-Based Pharmaceutical industry leaders.

**Why is IP protection important?**

The value of IP is measured in the aggregate. From sticking together and becoming the nucleus of a company, IP provides a competitive advantage.

**Is IP protection sufficient to safeguard research?**

"We're really starting to connect the dots," says Fon. "Ideas we had been thinking about for a long time are starting to make sense." New research has led to the discovery of drugs that may slow the progression of Parkinson's disease and their caregivers.

**What measures are necessary to safeguard Canada’s intellectual property?**

Dr. Edward Ivin is an associate professor at the University of British Columbia and director of the McGill Parkinson and Institute of National Research for Parkinson Canada's Scientific and Strategic Programs. He is director of the Parkinson Institute and Director of the McGill Parkinson and Institute of National Research for Parkinson Canada's Scientific and Strategic Programs.

"If a certain form of dementia emerges not because the brain cells were destroyed experimentally, but as a side effect of everyday life, we're not interested in being competitive on the IP front."

The recent Ivin's research has managed to connect the dots in a remarkable new finding of drug to help those suffering from Parkinson's disease.
In the last 30 years, cancer drug development and marketing duration has drastically decreased from ten to five to four years due to increased efficiencies in drug screening that can benefit from early patient enrollment through the availability of clinical studies and the introduction of fast-track review by some Health Authorities.

Therapeutic clinical trials are necessary to improve current available therapies and to treat other diseases such as cancer (oncology). Every year, several hundreds of different clinical studies in oncology are performed in Canadian Cancer Centers bringing the highest quality expected by the health authorities for their approval. With the availability of new emerging countries contributing to accelerating the process of pushing Canada’s participation in new innovative studies. As an immediate consequence on Canada, the opportunity limitations for patients, investigators, governmental, hospital / cancer centers, and academia, to benefit from studying new innovative drugs in Canada, benefiting from early access to new drugs in development. By reducing the Pharmaceutical sponsored clinical trials in Canada, the tax payers, will have to pay significantly more to maintain an already overburdened healthcare system. The Provincial financial burden in treating cancer patients will increase as the costs, no longer taken care by governments, will be passed on to Governments. It is time for our Canadian political leadership to take notice on how to ensure that new Clinical research is not displaced outside of Canada, and offering more attractive options other than the current tax credit offered to the Pharmaceutical Industry.

Our movements are normally controlled by dopamine, a chemical released that affects the balance between the nerves in the brain. When cells that produce dopamine die, Parkinson’s symptoms appear. Typically, that includes tremors, fatigue, slow speech, problems with handwriting, a stooped posture, and sleep disturbances.

As the disease progresses, some people with Parkinson’s may experience depression, difficult swallowing, cognitive changes, or sexual dysfunction. For London, the toughest part was coming to grips with “the knowledge that there’s something that is continuously creeping, unstoppable, like a sort of enveloping me, and I can’t really do anything about it.”

A slow decline People can live with Parkinson’s for a long time – sometimes over 20 years. Marjorie Zacks of Parkinson Society Canada, notes, “There’s no known cure for Parkinson’s, though researchers are studying many things that may help, including treating symptoms, replenishing dopamine levels, and even stopping the disease. Drugs can help, but they do have side effects.”

Increasing with age Parkinson’s disease is one of the more common of nearly 100 neurological disorders. It ranks as the 14th leading cause of death in Canada, and offers a stable career opportunity for Canadian researchers.

The power of preventative measures Depending on your age at the disease’s onset, you can lose an active life with Parkinson’s. The disease takes its toll in many ways. Zacks describes one woman who goes to bed wearing clothes and makeup, to avoid struggling in the morning. People age and the disease progresses, there are many things they can do. For example, impaired balance can cause falls, and swallowing problems can lead to pneumonia. Other impacts of the disease can be just as deadly, notes Parkinson Society Canada – the stigma when you’re in public (not being able to control how your body moves), the burden on caregivers, early retirement for some (and the financial stress that comes with that), the need to school everyone around you and live a lifestyle change.

LIVING WITH PARKINSON’S

AN AGE-OLD ISSUE