



ANNOUNCEMENT

\$2 MILLION INVESTED IN NEW PROSTATE CANCER RESEARCH

PROSTATE CANCER CANADA AND MOVEMBER PARTNER TO FUND TEN RESEARCH PROJECTS BREAKING NEW GROUND

Toronto, Canada | September 16, 2019– Canadian prostate cancer research leaders are receiving nearly \$2 million to accelerate discoveries to save and improve men’s lives. Prostate Cancer Canada and Movember awarded the funds through the Discovery Grant program to support new and innovative research.

“The future has never looked better for men with prostate cancer, but there is still work to do. We can’t stop as long as an estimated 11 men are lost every day to this disease,” says Dr. Stuart Edmonds, Vice President, Research, Health Promotion and Survivorship, Prostate Cancer Canada. “Supporting these discoveries opens new avenues of exploration to save and improve more lives, by creating new treatments and better ways to detect and manage the disease.”

“At Movember, a substantial amount of money raised during our campaign is allocated to partners like Prostate Cancer Canada for investment into projects like The Discovery Grant Program. Through this project, we are helping to support the best scientists in the country, enabling them to test ideas that could prove to be groundbreaking from diagnosis, to treatment and survivorship,” says Karli Kirkpatrick, Director of Marketing, Movember Canada. “We’re proud to support work that gives hope to men and their families facing prostate cancer.”

Too old to be treated for prostate cancer?

Dr. Shabbir Alibhai (University Health Network, Toronto)

The older and frailer a prostate cancer patient – the more likely his treatments will be scaled back, or not given. Dr. Alibhai is working with these men, frequently overlooked in research, following them over one course of treatment to determine how well they tolerate the therapies. This information will help determine what supports men might need to reduce side effects, and help them stay on treatment longer. He hopes the lessons learned in his study can be widely implemented in two years, for prostate cancer and other types of cancers.

CHANGING THE FACE OF MEN’S HEALTH



Dr. Alibhai says: “The ultimate hope is to find better ways of identifying men who are high risk of having side effects when they’re on treatments, and ways we can try to reduce them. Ultimately, men may be able to survive longer and better – with less suffering, less fatigue and less reduction in quality of life.”

Prostate cancer’s Achilles’ heel

Drs. Michael E Cox and Kishor Wasan (University of British Columbia, University of Saskatchewan)

Prostate cancer feeds off testosterone, and is treated with [hormone therapy](#) when it spreads outside the prostate, cutting off the supply of testosterone to slow tumour growth. But in some cases, the cancer continues to grow, evolving to be incurable. The big question: how is it possible for prostate cancer to grow when its testosterone supply has been cut off? Drs. Cox and Wasan are researching a new discovery – that the cancer is actually changing cholesterol into testosterone. Their team is looking at cholesterol-lowering drugs, called statins, to cut off cholesterol’s pathways into the prostate cancer cells. No cholesterol means no testosterone, which means cancer cells starve and stop growing. They hope to create a therapy that would block both the creation of testosterone from cholesterol, and the attraction of cholesterol to prostate cancer cells. Dr. Cox says: “The hope is that we’ll be able to turn advanced prostate cancer into a manageable condition, not a lethal disease.”

Cause and effect

Dr. Allen Ehrlicher (McGill University, Montreal)

When prostate cancer metastasizes, it becomes difficult to detect and treat. But how do those cancer cells develop the ability to spread into other areas of the body in the first place? Dr. Ehrlicher believes that cancer cells may be directed by their surrounding environment. He plans to study changes not only in the cancer cells themselves, but also in their environment, to determine what causes them to spread. He hopes this information will give doctors new strategies to predict if their patients’ cancer will metastasize to be able to offer better treatments with fewer side effects.

Dr. Ehrlicher says: “Guided by the insights from this work, patients may more reliably consider options other than surgery, radiation or chemotherapy to manage their prostate cancer, as these can have create life-altering complications.”

Tracing cancer’s path from innocuous to lethal

Dr. Martin Gleave (University of British Columbia, Vancouver)

What happens to a cancer cell when it stops responding to [hormone therapy](#)? How does it change, and what can that tell us? Using thousands of prostate cancer cells from patients, Dr. Gleave’s team will examine the changes the cells go through when hormone therapy begins, ends, and throughout treatment. By identifying if similar changes occur in different patients’ cells, Dr. Gleave hopes to discover common genes that could help doctors better manage patient care. Dr. Gleave says: “We expect this



research will yield novel insights into why prostate cancer progresses and becomes resistant, and could give doctors important information about which treatments will work best for their patients.”

Designing gold to seek and destroy prostate cancer

Dr. Larry Goldenberg (University of British Columbia, Vancouver)

On the heels of an explosion in the research of “seek and destroy” cancer treatment, Dr. Goldenberg is taking it one step further. There are now ways to use [radiation](#) that targets and kills cancer cells with minimal damage to the surrounding, healthy tissue. Unfortunately, this type of treatment is not well focussed for prostate cancer. Often, healthy cells in the salivary glands, kidneys, adrenal glands and other areas are damaged, resulting in significant side effects. For the first time, a specific part of prostate cancer cells is being studied to identify where radiation should be targeted. Dr. Goldenberg is designing a “gold” nanoparticle that would deliver radiation directly to that area of the cell, sparing damage to healthy tissue and reducing side effects for men receiving radiation treatment. Dr. Goldenberg says: “Optimistically, this research would allow us to significantly control metastatic prostate cancer, and perhaps one day destroy cancer in the prostate before it has a chance to spread.”

Using urine to manage progression

Drs. Thomas Kislinger and Stanley Liu (University Health Network, Sunnybrook Research Institute, Toronto)

Many men with low-risk prostate cancer opt to manage it through [active surveillance](#) rather than treat it immediately. This means the cancer is monitored and treatment delayed unless the cancer progresses, saving many men from life-changing side effects. The trick is accurately determining which men have low-risk prostate cancer and can safely use active surveillance, and which will develop aggressive cancer that needs to be dealt with sooner. Drs. Kislinger and Liu discovered that the urine collected from men who received a digital rectal exam is enriched with proteins released from the prostate. They believe that the amount of these proteins could change in more aggressive disease and could be the key to distinguishing between aggressive and slow growing prostate cancer.

Dr. Kislinger says: “We hope to create a marker from urine that can better inform doctors about the aggressiveness of their patients’ prostate cancer, to better personalize management decisions for men.”

Fat as fuel

Dr. Jacques Lapointe (Research Institute of the McGill University Health Centre, Montreal)

Prostate cancer cells use various sources of food to fuel their growth and fatty acids are one fuel source. Dr. Lapointe has found that a gene involved in breaking down fatty acids looks different in men with metastatic prostate cancer. With this knowledge, he is studying the gene to learn how it helps prostate



cancer survive and grow from fatty acids. Dr. Lapointe says: “This project will give us new understandings about how fatty acids impact prostate cancer growth, and could lead to better management of the disease and new markers that will help doctors choose the best treatment for each patient.”

More than testosterone

Drs. Éric Lévesque and Chantal Guillemette (Université Laval, Quebec City)

Testosterone’s role in the growth of prostate cancer has been studied, but many other male hormones are still to be examined. What if cancer cells also feed their growth using these other hormones? Dr. Éric Lévesque’s team will examine the presence of these unstudied male hormones in blood samples from 1,700 past prostate cancer patients. Along with the blood samples, there are records of how their cancer progressed. Putting this information together, Dr. Lévesque’s team will be able to identify any connection between cancer progressing and these hormones. Dr. Lévesque says: “This research could lead to more accurate and earlier ways to catch cancer that is more likely to progress and more effective approaches to hormone therapy.”

X marks the spot

Dr. Cynthia Ménard (Centre hospitalier de l’Université de Montréal)

[Radiation](#) is usually the first option doctors offer patients when the cancer returns after surgery, but they aren’t always able to tell exactly where the cancer is. This means that the radiation can be targeting healthy cells, and the patient will experience side effects, or the cancer could be missed. Dr. Cynthia Ménard is working on a tool for doctors that will make radiation treatment more effective and less toxic, using a newer and more sensitive type of scan, called PSMA PET imaging. She is using thousands of these images to construct maps that will help doctors predict where a particular patient’s cancer is likely to have returned. Dr. Menard says: “My ultimate hope is that we improve cure rates and improve toxicity of radiation.”

Using the body’s own cells to kill cancer

Drs. Ryan Wylie and Anthony Rullo (McMaster University, Hamilton)

Drs. Wylie and Rullo are pursuing an intriguing strategy to determine if we can use immune cells in our body to kill cancer. Their team is looking at using healthy cells in the immune system, called T cells, whose primary job is to kill other cells that could cause harm, to fight prostate cancer. The dream – turning prostate cancer into a chronic disease, like high cholesterol, for which you take drugs for many years to control it without significant side effects or damage to the rest of your body. They are testing a new approach that, if proven successful, could lead to drugs that will give men more time and fewer side effects than current treatments, drastically increasing quality of life. Dr. Wylie hopes this research will



lead to drugs that can be given to men with advanced prostate cancer on a long-term basis. Dr. Wylie says: “We’d like to see prostate cancer become a disease that men can live with. One that can be manageable long-term without life-altering side effects.”

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About Prostate Cancer Canada

Prostate Cancer Canada is the leading national charity addressing prostate cancer needs across the country. We strive to save lives by improving prevention, detection and treatment of prostate cancer, and to enhance the quality of life for all Canadians affected by the disease through collaboration, driving world-class research and translating knowledge into better outcomes. To donate or learn more, please visit prostatecancer.ca.

About Movember

Movember is the leading global men’s health charity working to change the face of men’s health. The charity raises funds to deliver innovative, breakthrough research and support programs that enable men to live happier, healthier and longer lives. Committed to disrupting the status quo, millions have joined the movement, helping fund over 1,250 projects focusing on prostate cancer, testicular cancer and suicide prevention. In addition to tackling key health issues faced by men, Movember is working to encourage men to stay healthy in all areas of their life, with a focus on men staying socially connected and becoming more open to discussing their health and significant moments in their lives. The charity’s vision is to have an everlasting impact on the face of men’s health. To donate or learn more, please visit Movember.com.