



Miracles *in the* Making

Who's Next?

The lady down the street?

Your son's hockey coach?

The cashier at your local grocery store?

You?

The fact is, when it comes to pointing a finger and asking, "who will be the next person you know who will get cancer, there really is no simple answer...yet. This yet is an important clause. Companies around the world are racing to discover the tests to catch cancer early and eventually, stop it in its tracks. One of these companies is Winnipeg-based Miraculins Inc.

Miraculins is a company with a focus. Using their proprietary BEST™ platform for the screening and identification of target proteins and peptides related to diseases, they are well on their way to the discoveries that may, some day, lead to quicker diagnosis and treatments for both breast cancer and prostate cancer. In fact, in January 2005 the company launched a breast cancer study program that will apply BEST™ to clinical samples collected by Radiant Research, a clinical research company based out of Washington, who will provide Miraculins with breast cancer samples for study.

While originally focused on prostate cancer research, Miraculins' has readily diversified, noting the similarities between both forms of cancer. Dr. Jim Charlton, President of Miraculins Inc., points out that, "there are many parallels between breast and prostate cancer, the most prominent

being a lack of accurate diagnostic methods, which currently have a very high incidence of false positives."

Hoping to change that, Miraculins bases its development on the ability to identify biomarkers in body fluids that are expressed abnormally in victims of certain diseases. Analysis of the relative levels of these proteins or protein fragments (peptides) provides a window of opportunity for the development of useful diagnostics and therapeutics for target disorders.

And, in an age when 45,500 North American women are expected to die from breast cancer each year, and 33,100 North American men are expected to die from prostate cancer each year, new and better testing is like music to the ears for many. Especially when the false positive rate for mammography is approximately 10 per cent (if a woman has 10 mammograms over her lifetime, she has a greater than 50 per cent chance of at least one false positive diagnosis).

"We want to eliminate those false positives," says Dr. Charlton. "If we can eliminate those, just think of all the waiting we will eliminate, the agony, the costs."

In December 2004, results from early clinical investigations
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of prostate cancer indicated that Miraculins was well on its way. Preliminary analysis of samples from 54 of the patients in the study, showed that the concurrent analysis of clinical factors and biological data had a sensitivity and selectivity of greater than 90 per cent respectively, and provided a significant improvement over the currently used Prostate Specific Antigen (PSA) test. For example, a great number of men are referred for biopsies to confirm diagnosis from the PSA test, yet approximately 75 per cent do not actually have cancer.

Next, the company is working on collecting a full set of data for 100 more patients.

“I think we’re on the right track,” confirms Dr. Charlton. “In our first year we focused on the logistics, but now we’re really getting into the nitty-gritty. We’re committed to this until the end and I think that in the end, we’ll come out with an accurate way of testing for both breast and prostate cancer.” ■

The Numbers

Breast Cancer Stats

- In 2004, an estimated 21,200 (Canadian) women will have been diagnosed with breast cancer and 5,200 will have died from it.
- On average, 407 Canadian women will be diagnosed with breast cancer every week.
- On average, 100 Canadian women will die of breast cancer every week.
- One in 9 women are expected to develop breast cancer during her lifetime. One in 27 will die of it.
- Breast cancer is the most frequently diagnosed cancer in Canadian women.
- Since 1993, incidence rates for breast cancer have stabilized and death rates have declined steadily since 1990.

Prostate Cancer Stats

- In 2004, an estimated 20,100 (Canadian?) men will have been diagnosed with prostate cancer and 4,200 will have died from it.
- On average, 386 Canadian men will be diagnosed with prostate cancer every week.
- On average, 81 Canadian men will die of prostate cancer every week. One in 8 men will develop prostate cancer during his lifetime, mostly after age 70. One in 26 will die of it.
- Prostate cancer is the most frequently diagnosed cancer in Canadian men.

Source: www.terryfoxrun.org