

2012

Fighting for Life

CANCER RESEARCH



Dr Meredith Irwin and Dr Michael Ohh
fight cancer through leading-edge research.
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Anita Portier, 54, ovarian cancer survivor

“Prevention research should be first and foremost. If more were known about how to prevent ovarian cancer ... I probably wouldn't have had to go through what I did.”

- Anita Portier

“If research shows that Vitamin D protects against this deadly disease and if inflammation plays an important role, then there could be meaningful action women could take to prevent the disease,” she says.

The Society is funding more prevention research, such as Dr Koushik's study. While treatments for ovarian cancer are getting better, Anita Portier says preventing the disease wherever possible is the best solution. “Prevention research should be first and foremost. If more were known about how to prevent ovarian cancer or if there was a good early detection test, I probably wouldn't have had to go through what I did.”



Exposures add up

Through the Society's advocacy efforts, Ontario passed the *Cosmetic Pesticide Ban Act*, greatly reducing the use of pesticides in lawns and gardens. However, pesticides are still commonly used in farming, raising questions about the safety of the workers handling them. The Occupational Cancer Research Centre (OCRC) is addressing these important concerns.

Karin Hohenadel, from the OCRC, led a 2011 study which showed an increased risk of developing non-Hodgkin lymphoma when farmers are exposed to multiple pesticides, an important advance as this type of pesticide use is very common in farming. “To prevent cancer and protect farm workers, we need more research to better understand the risk of exposure to pesticides and cancer,” says Hohenadel, whose grandparents were Ontario farmers.

Studies like this conducted by the OCRC – jointly funded by the Society, Cancer Care Ontario, and the Workplace Safety and Insurance Board, in collaboration with the United Steel Workers – will ultimately lead to policies to protect people with jobs that expose them to substances that increase cancer risk.

“To prevent cancer and protect farm workers, we need more research to better understand the risk of exposure

Old dr

What if a 50-year-old person with 2 diabetes could take a drug, called metformin, that has minimal side effects and is an excellent drug to

“If this prevent cancers from powerful bl

Three Society-funded studies showed metformin could help prevent breast cancer. Dr Neil Fleshner, a breast cancer expert at the University of Toronto, says metformin may play a role in preventing breast cancer. Pollak in Montreal says metformin helps to prevent breast cancer. Goodwin is leading a study to find out whether metformin helps to prevent breast cancer.

Repurposing approved drugs to reach the public is already off patent and prevent more of occurring. it would

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Jordan Petingalo, 14, 10-year survivor of childhood brain cancer, with his mother Lisa

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“... the outcome will be so much better for the children and their families.”

- Lisa Petingalo

that will undoubtedly improve outcomes for kids diagnosed with the disease. Dr Michael Taylor, a pediatric neurosurgeon in Toronto, discovered that medulloblastoma is not one disease, but four, each with a different genetic fingerprint.

By identifying the specific type of medulloblastoma a child has, treatment can be better tailored for each child, which could save more lives and create brighter futures for children with this disease.

Jordan's mother, Lisa, is excited to see that funds raised for research are making a difference and will have an impact. "If more lives can be saved and the most severe effects can be avoided, the outcome will be so much better for the children and their families," she says.



Dr Meredith Irwin and Dr Michael Ohh

Marriage of minds

Dr Meredith Irwin and Dr Michael Ohh met in a Harvard University lab in 1998 while each was studying a different cancer-related protein. Today, the two Society-funded researchers are married to each other and their leading-edge research regarding those cancer-killing proteins could lead to new targeted therapies for cancer.

Dr Irwin, a clinician-scientist, is working to develop better treatments for children with neuroblastoma, a nervous system cancer that is a leading cause of childhood cancer death. She is studying a number of drugs to test their effect on advanced neuroblastoma and has also recently shown that new therapies, including one called nutlin, could help make chemotherapy more successful.

Dr Ohh has been studying a protein that when missing causes a variety of cancers, including kidney cancer. He discovered that this protein regulates how cells sense and respond to oxygen and, when missing, cells can grow with little oxygen. This promising research could lead to better treatments for cancer patients.

The couple also fight cancer by collaborating on research – for instance, studying the use of nutlin to make kidney cancer more responsive to chemotherapy.

"The Society has been wonderful in funding both basic and translational research, and without that support a lot of our work would not have been possible," says Dr Ohh.



Dr Li Zhang

Fighting

With over a decade of research, Dr Li Zhang has led the way for acute myeloid leukemia in adults. Her system to fight the

“Funding from the initiative to a new

Dr Zhang's team called a DNT cell donor cells that transplant. Her to the number of th on the cusp of m be tested first in leukemia and in t risk after a stem

“Funding from the discovery of these save lives,” says



Dr. Angela Cheung



Art Sibley, 65, head and neck cancer survivor and peer support volunteer

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Balancing risk and benefit

Society research recently showed that the drug exemestane can prevent breast cancer in post-menopausal women at increased risk of the disease. But, there are still questions about the effects of the drug on women's bone health that need to be addressed before it can be widely used.

"The Society's support of this research is a great opportunity to help many post-menopausal women ..."

- Dr. Angela Cheung

Does it increase the risk of a hip fracture, for example, limiting a woman's activity level and independence? The Society is funding research led by Dr. Angela Cheung, a women's health physician in Toronto, to learn whether or not exemestane has negative effects on bone, such as decreased strength and density, that could lead to fractures. The results will give women better information to balance the risks and benefits when considering this new breast cancer prevention option.

"The Society's support of this research is a great opportunity to help many post-menopausal women, not just in preventing cancer but in understanding how the treatment may or may not affect their bone health and quality of life," says Dr. Cheung.

Better brighter

For many kids who with their last treatment, but can anyone, but can About two-thirds effects, including challenges, which To improve the c and survivors an Society is collab of Ontario on a s initiative is the v Care Plan that w and their families decisions about Along with the o initiative, these e better futures be

"Any research that can improve your quality of life while going through treatment and after surviving cancer is so important."

- Art Sibley

This research is an essential step in making the tool widely available and used by clinicians to better support their patients. Ultimately, it will allow doctors to properly address swallowing problems and prevent serious complications such as malnutrition or pneumonia, an important concern for people with head and neck cancer.

As a volunteer with the Society's Peer Support program, Art has spoken to nearly 40 head and neck cancer patients. "I tell them adapting to swallowing problems is a long, slow process. Any research that can improve your quality of life while going through treatment and after surviving cancer is so important."

More research is needed to defeat cancer

Thanks to the generosity of our donors and the tireless efforts of our volunteers and staff, the Society is leading the fight against cancer.

But there is more research to be done. Help defeat cancer sooner by making a donation to the Canadian Cancer Society.

Please visit www.cancer.ca.

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