

MS PROGRESS Report

New research brings new hope for people living with MS

With your generous support, researchers are making significant strides in the understanding and treatment of multiple sclerosis (MS). In the last several months alone, researchers funded by the Multiple Sclerosis Society of Canada have made incredible breakthroughs, laying the groundwork for a future free from MS.

Making progress today

A Canadian clinical trial has discovered that a common acne medication, minocycline, can reduce the risk of conversion to MS in people who display early signs of the disease – specifically, those with clinically isolated syndrome (CIS). CIS is defined as an episode of neurological symptoms that are indicative of MS.

Led by Dr. Luanne Metz of the University of Calgary, the trial demonstrated that oral minocycline therapy is a safe, affordable new treatment option for people with CIS. Study participants treated with minocycline were significantly less likely to progress and convert to MS than those treated with a placebo. And since minocycline is already approved by Health Canada, it offers an effective, readily available treatment for individuals living with CIS.

In fact, minocycline therapy could ultimately impact tens of thousands of people across Canada and around the world.

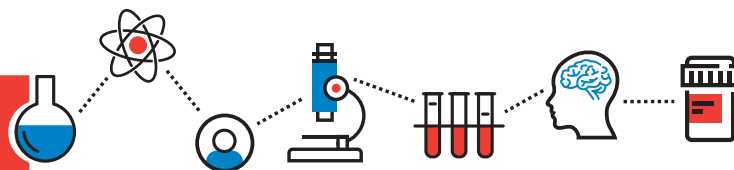


Recent successful minocycline trials were led by Dr. Luanne Metz of the University of Calgary.

In addition to the health benefits, this treatment option is also extremely cost effective. While current MS drug therapies are approximately \$20,000 to \$40,000 per year in Canada, the cost of minocycline could be as low as \$600 annually.

Thanks to generous friends like you, the MS Society of Canada played a fundamental role in supporting not only this clinical trial, but the early-stage research experiments conducted by Dr. V. Wee Yong that helped uncover the application of minocycline in managing MS.

Breaking news in MS RESEARCH



The U.S. Food and Drug Administration (FDA) approved Ocrevus™ (ocrelizumab) for the treatment of primary progressive and relapsing forms of MS, making it the first-ever FDA-approved treatment for primary progressive MS. In clinical trials, Ocrevus™ was shown to significantly reduce the progression of clinical disability at 24 weeks. Other benefits include a decrease in the number of brain lesions and a reduced rate of brain loss. The Genentech-developed drug is currently approved for sale only in the United States, but the MS Society of Canada is hopeful that the drug will be approved in Canada in the near future.



A Message from the
Vice President
of Research
Karen Lee, PhD

I want to welcome you to the new issue of **MS Progress Report**, your bulletin from the front lines of MS research. As the country with one of the highest rates of MS, Canada is home to some of the most exciting and forward-thinking MS research in the world.

In this issue, you'll learn how the Multiple Sclerosis Society of Canada helped drive breakthrough clinical trials of minocycline, a common acne medication that shows promise as a treatment for MS. This kind of translational research is an important focus area for us. By applying laboratory science in real-world settings, we hope to find practical, immediate care benefits for people living with MS today.

As for tomorrow – the Canadian MS Progression Cohort has launched, and this large-scale, long-term study will help us learn more about MS progression. You'll find more details in this newsletter. The better we understand MS, the better equipped we are to fight it. That's why this first-of-its kind study is so important.

So much has happened. So much more still needs to happen. But together, we are making real headway against Canada's disease.

I hope you enjoy this issue of Progress Report. As an MS Society supporter, you have a lot to be proud of. Your support is helping fund groundbreaking research and thanks to you, research is moving forward!

Sincerely,

Karen Lee, PhD
Vice President, Research
Multiple Sclerosis Society of Canada

Working toward a brighter tomorrow

With your support, the MS Society of Canada – in partnership with Biogen Canada and Brain Canada – has also launched a \$7+ million Canadian MS Progression Cohort study. The first study of its kind in Canada, the Canadian MS Progression Cohort will monitor Canadians living with MS over time to pinpoint the exact triggers of progression and establish tools that can detect those triggers.

Led by a multidisciplinary team of researchers and health professionals across Canada, this study could potentially impact how we treat and diagnose MS. The team will investigate biological changes that occur during progression, the effects of treatments on disease progression, real-world health outcomes, socioeconomic impacts, and many other factors.

This initiative will not only generate one of the most comprehensive MS databases, but will also encourage collaborative research across Canada and engage the voices of people living with MS.

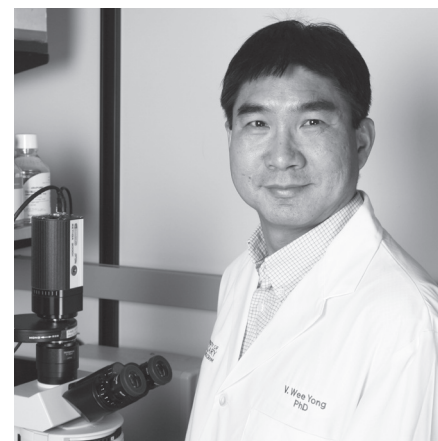
“Being diagnosed with multiple sclerosis can be daunting. Symptoms are inconsistent and finding ways to manage the disease can be tricky. A study like this could mean an end to the guessing game,” says Chantal Milne, who was diagnosed with MS in 2012. “I want to be the mom who is able to play with my daughter on the floor, for years to come. It brings me comfort to know that time and energy are being spent on research that will not only benefit me, but also future generations – including my daughter’s.”



Chantal Milne, mother living with MS, pictured here with her daughter.

RESEARCH SPOTLIGHT:

Dr. V. Wee Yong



Dr. V. Wee Yong – Professor at the Hotchkiss Brain Institute and the Departments of Clinical Neurosciences and Oncology at The University of Calgary – has been working in MS research since 1986. In 1990, Dr. Yong submitted his first successful grant application to the MS Society of Canada, and he has received consistent funding ever since.

“Funding from the MS Society of Canada has allowed me to branch out in new directions, to take chances with new discoveries that otherwise could not have happened with conventional funding, and to recruit top trainees to my laboratory,” explained Dr. Yong. “The MS Society of Canada remains the organization that supports the highest amount of research and training around MS in Canada, higher than even what the Government of Canada has provided.”

Currently, Dr. Yong's research focuses on understanding how immune cells become dysregulated in MS and then enter the brain and spinal cord to inflict injury. His team discovered that a common acne medication, minocycline, could modulate immune cell activity and protect brain cells from immune attacks. His research ultimately led to the successful clinical trial of minocycline for treating people living with early onset MS. In addition, Dr. Yong is researching strategies to promote myelin repair in the hopes of reducing – or even reversing – the progression of MS.

Meet Captain Jack: A Canadian MS champion



In 1976, Jack MacDuff led his curling team from St. John's, Newfoundland to number one at the Brier – Canadian curling's highest honour. More than 40 years later, Jack is still determined to live his best life while living with primary progressive MS.

After his curling achievements, Jack enjoyed a successful career with General Motors. Always an athlete, Jack curled, golfed, and he and his wife Janet enjoyed cycling together. Then one day in 1989, Jack noticed that he couldn't focus on the golf ball. He brushed it off at first, but when his golf scores kept getting worse, he knew there was something wrong.

It took two years of doctors' visits, but Jack finally got the diagnosis: MS. “I got the news. There were no medications to help me, no cure in sight, so I thought – okay, I can do this,” says Jack. His positive attitude toward life has helped him cope with having MS. “My doctor used to say he loved seeing me in his office because no matter what news he gave me, I could make him laugh.”

Living life to the fullest

A decade later, Jack began experiencing mobility issues, and he now uses a wheelchair. But that hasn't stopped him from getting as much exercise as possible, lifting weights and wheeling himself around town. When asked why he stays so active, he answers simply but profoundly, “Because I can.”

Jack was also involved with the New Brunswick MS Bike Tour for several years. While he couldn't ride a bike, he cheered on the participants and achieved the event's top fundraiser status, raising more than \$66,000. While Jack has decided to retire from his involvement in MS Bike, he is eager to be involved in other ways: “I'd like to do the MS Walk in my wheelchair this year. When you have limits, you just adjust your goals and dreams accordingly.”

“I know there are a lot of people, researchers and doctors, trying very hard to find a cure for this disease and I believe that someday, there will be help,” Jack says. “What I'd like to say to anyone, whether it's a young athlete, an underdog at the Brier, or someone newly diagnosed with MS, is to take every day and do the best you can and remember, you are never alone on your journey.”



For more information, please visit mssociety.ca



Funding high-quality MS research

The MS Society of Canada is proud to support MS research designed to improve the health and quality of life of people living with MS. With your help, we are able to fund several researchers through our Operating Grant Program. After reviewing many applications submitted to the 2017-2018 Annual Research Competition, we're pleased to award \$4.5 million in Operating Grants to support 14 new research projects in Canada, including:

- **Dr. Marcia Finlayson, Queen's University**
A multi-site randomized controlled trial of MS INFoRM: An interactive fatigue management resource for persons with MS
- **Dr. Timothy Kennedy, Montreal Neurological Institute, McGill University**
Identifying new molecular mechanisms that promote myelin maintenance and remyelination
- **Dr. Shannon Kolind, University of British Columbia**
Establishing an imaging biomarker for disease progression in MS
- **Dr. Dalia Rotstein, University of Toronto**
Immigration and the risk of MS

Over the next two to three years, these researchers will delve into many innovative research areas that have the potential to impact the MS field – and the day-to-day lives of people with MS.

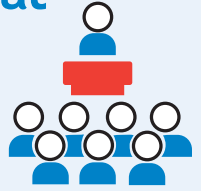


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Fostering collaboration at the endMS conference



In December, the MS Society of Canada hosted the endMS conference, Canada's largest MS research conference. Many of the field's most respected researchers attended and shared updates on many aspects of MS research including cognition and behavior, neuroimmunology, and neuroprotection.

In addition, the conference provided the opportunity for research trainees to present their work, attend career development workshops, and speak with mentors who could help guide their research careers.

HEAR MS Day connects people and practice



The endMS conference also featured HEAR MS (Hope and Engagement through Accelerating Research in Multiple Sclerosis)

Day – a day dedicated to building and strengthening connections between research trainees and people living with MS. During HEAR MS Day, trainees worked with people affected by MS on activities designed to challenge trainees to think about their research from another perspective.

“As the endMS Conference wound down to a close, the experience left me feeling inspired and hopeful about the future of MS research and a better life for Canadians affected by the disease,” said Dr. Karen Lee.

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By becoming a monthly donor, you will help us plan ahead for a future without MS. For more information on how you can provide reliable monthly support,

please visit
mssociety.ca/monthlygiving
to learn more.

See you online!

