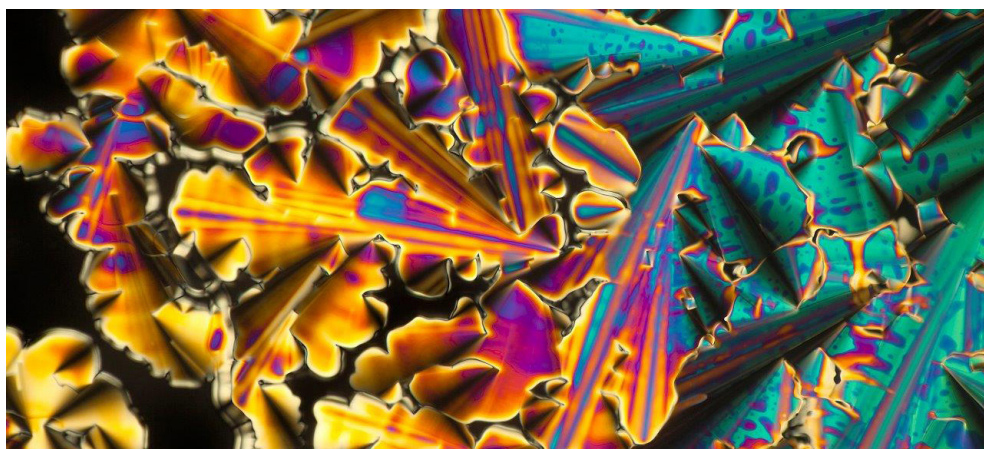


Research Canada **UPDATE**

April 2017

NEWS FOR PARLIAMENTARIANS ON CANADIAN HEALTH RESEARCH



"Crystallized DNA"

DISCOVERY OF 18 NEW AUTISM-LINKED GENES MAY POINT TO NEW TREATMENTS

The newest study from the [Autism Speaks MSSNG project](#) – the world's largest autism genome sequencing program – identified an additional 18 gene variations that appear to increase the risk of autism. The study analyzed 5,205 whole genomes from families affected by autism – making it the largest whole genome study of autism to date.

So far, research using the MSSNG genomic database has identified 61 genetic variations that affect autism risk. The research has associated several of these with additional medical conditions that often accompany autism. The goal, says study co-author Mathew Pletcher, Autism Speaks vice president for genomic discovery, "is to advance personalized treatments for autism by deepening our understanding of the condition's many subtypes."

He explained, "In all, 80 percent of the

61 gene variations discovered through MSSNG affect biochemical pathways that have clear potential as targets for future medicines."

The findings also illustrate how whole genome sequencing can guide medical care today. For example, at least two of the autism-associated gene changes described in the paper were associated with increased risk for seizures. Another has been linked to increased risk for cardiac defects, and yet another with adult diabetes. The findings illustrate how whole genome sequencing for autism can provide medical guidance to individuals, families and their physicians, the investigators say.

[Read the article in *Scientific American*.](#)

Next Event

3:30 p.m. -6:30 p.m.

June 5, 2017

Health Research Caucus

Indigenous Health Research in Canada

Recent Event



Co-hosted by the Canadian Association for Neurosciences

Sponsoring participants of the Health Research Caucus event, Neuroscience Research in Canada, included:

Sanofi Genzyme
Johnson & Johnson Inc.
Innovative Medicines Canada
AbbVie
Centre de recherche Institute universitaire en santé mentale de Québec
Parkinson Canada
Medtronic
McGill University Health Centre
Research Institute

To see all participants and to learn more about the event page [here](#).



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SCREENING PLATFORM TO HELP MODEL NEUROLOGICAL DISEASE

The Montreal Neurological Institute and Hospital at McGill University (MNI), The Centre for Drug Research and Development (CDRD), and Merck are joined forces to create a screening platform that will help researchers better model neurological disease, and to advance new therapeutics for some of the most debilitating conditions such as ALS and Parkinson's disease.

[Read more...](#)

THE MULTIPLE SCLEROSIS SOCIETY OF CANADA, BIOGEN CANADA, AND BRAIN CANADA PARTNER FOR MS PROGRESSION STUDY

The study will be the first of its kind in Canada and could change how MS is treated and diagnosed and answer questions about how and why the disease progresses. This may serve as a model for research on other conditions such as Alzheimer's, Parkinson's, ALS and Huntington's. [Read more...](#)

2017 GAIRDNER AWARDS BRING INTERNATIONAL RECOGNITION TO LEADING CANADIAN RESEARCHERS

Dr. Lewis Kay, Professor at UofT, and Senior Scientist at Sickkids, is recognized for important contributions to developments in NMR spectroscopy, and methods that expand our understanding of the flexible nature of protein structure. The methods developed by Dr. Kay are used in researching illnesses such as diabetes, cancer and cardiovascular disease.

Dr. Antoine M. Hakim, Neurology, University of Ottawa is recognized "for outstanding research into stroke and its consequences and championing stroke prevention and treatment in Canada and beyond."

[Read more about the
Gairdner Award recipients](#)

'BIGGEST BREAKTHROUGH SINCE ANTIDEPRESSANTS' IS TURNING LIVES AROUND IN OTTAWA

Dr. Pierre Blier's research in the mood disorders unit at the Royal's Institute of Mental Health Research (IMHR), has found that ketamine - a type of anaesthetic - works as an antidepressant providing rapid treatment for people where other forms of treatment haven't worked. Even in people whose depression does not lessen, ketamine works powerfully and quickly to

reduce suicidal thoughts and could be an effective intervention to prevent suicidal thoughts and acts. Work is underway at the IMHR to use imaging technology to understand what ketamine does in the brain, with the hope of locating areas of the brain associated with suicidal thoughts.

[Read more about Dr. Blier's work](#)

WELCOME TO NEW RESEARCH CANADA MEMBERS



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**Hamilton
Health
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THANK YOU TO THE SPONSORS OF THE HEALTH RESEARCH CAUCUS EVENT *Neuroscience Research in Canada*



The Canadian Association for Neuroscience is a non-profit organization dedicated to the promotion of Neuroscience research in Canada.

CAN-ACN is an Association of researchers, students and trainees actively working in Neuroscience research. Our Association represents the interests of Canadian neuroscientists at national and international levels.



Sanofi Genzyme is the specialty care global business unit of Sanofi, focused on rare diseases, multiple sclerosis, oncology and immunology. We help people with debilitating and complex conditions that are often difficult to diagnose and treat. We are dedicated to discovering and advancing new therapies, providing hope to patients and their families around the world.



At Johnson & Johnson Inc., our mission is to enrich the health and wellness of every Canadian, every day. Behind every one of our brands is a tradition of innovative research, cutting-edge technology, and a deep commitment to delighting our consumers with products that they can trust for their entire family.



Innovative Medicines Canada is the national voice of Canada's innovative pharmaceutical industry. We advocate for policies that enable the discovery, development and commercialization of innovative medicines and vaccines that improve the lives of all Canadians. We support our members' commitment to being valued partners in the Canadian healthcare system.



Health Research Caucus event *Neuroscience Research in Canada*, February 13, 2017.