



2018 Annual Report

May 2019

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ABOUT GAIRDNER

History

The Gairdner Foundation was established in 1957 to award annual prizes to individual researchers whose discoveries in biomedical science have had major impact on progress in science and on human health. Annually, seven awards are given: five Canada Gairdner International Awards, for excellence in biomedical research, the John Dirks Canada Gairdner Global Health Award, for outstanding achievements in Global Health research, and the Canada Gairdner Wightman Award, reserved for a Canadian scientist demonstrating outstanding science and exceptional leadership in Canadian medical science. The Awards are highly regarded as one of the world's most prestigious biomedical prizes with many of our laureates (89 in our history) going on to receive the Nobel Prize.

Mission

- To **celebrate excellence** in research that impacts human health through the Canada Gairdner Awards
- To **convene leaders** from the research, academic, public and private sectors to explore the key research issues of the day
- To **inspire the next generation** of students in the excitement and potential of scientific research in a global context through outreach programs

MESSAGE FROM THE CHAIR



The Gairdner Foundation continues to be a leader among Canadian scientific organizations and is truly a Canadian icon with international recognition. Our outreach programming continues to grow and we continue to develop accessible programming to bring our prestigious laureates and their world-renowned science to the Canadian public.

In 2018, for the first time, we recognized eight laureates in a variety of research areas. This allowed us to expand our National and Student Outreach programs coast-to-coast. We also continue to grow our Canada Gairdner Public Lecture series, of which I am particularly proud. This series allows us to engage new audiences and provides the

Foundation with new connections to science centres across Canada. Once again, as our laureates travelled across the country, they cultivated and inspired the next generation of researchers, innovators and leaders with stories of their careers and advice on how to make the most out of a passion for science.

This year was a special year for Gairdner as we awarded two outstanding individuals for the John Dirks Canada Gairdner Global Health Award. We were proud to recognize their team work and celebrate their accomplishments and impact on the global health research landscape.

The 2018 Canada Gairdner Laureates' Lecture was an inspiring display of scientific research that truly affects the lives of people all around the world. Discussions of optogenetics, genomic imprinting, oncology and the Global Burden of Disease attracted a large and diverse audience as each of the laureates presented their award-winning research at the University of Toronto. Following the Laureates' Lectures, awardees and their families joined members of the healthcare, academic and corporate sectors in a formal celebration of their achievements at the awards gala, which is always a highlight of the annual Gairdner programming.

I would like to extend my sincere thanks to the Government of Canada and Canadian Institutes of Health Research (CIHR), and the Governments of Ontario, Québec and Alberta for their generous support of the Gairdner Foundation.

In 2018, as in every year, I am proud to be the Chair of the Gairdner Foundation's Board of Directors. This was an especially important year for me as it was my last full year as Chair. As I look back on my time with the Foundation I am immensely proud of what the team at Gairdner has been able to accomplish. The dedicated and committed group of volunteers across Canada bring an energy to the Gairdner mission that helps us continue to be Canada's most prestigious prize in biomedicine. I will always remain an ambassador for the incredible work and impact of the Gairdner Foundation both in Canada and around the world.

A handwritten signature in black ink that reads "D Lorne Tyrrell". The signature is fluid and cursive, with the first name "D Lorne" and the last name "Tyrrell" clearly distinguishable.

D. Lorne Tyrrell, OC, AOE, MD/PhD, FRCPC, FRSC, FCAHS
Chair, Gairdner Board of Directors

MESSAGE FROM THE PRESIDENT & SCIENTIFIC DIRECTOR



2018 was a great year for the Gairdner Foundation as we recognized and celebrated outstanding scientists from four distinct fields of research including optogenetics, epigenetics and genomic imprinting, clinical oncology, and global health research, particularly the Global Burden of Disease study.

As part of our annual outreach programming, the 2018 laureates travelled across the country sharing their stories and research with faculty, trainees and high school students. With such a fantastic array of research to share, the laureates captivated audiences in all provinces. In fact, in 2018 we continued to expand our programming with over 10,000 participants and in doing so, included the most universities and high schools in our National and Student Outreach programming in Gairdner's history!

Gairdner continues to grow the public lecture series, launched in 2017, which brought together members of the public to hear from world-class scientists. We continue to put a particular emphasis on engaging the public with science that affects their everyday lives by making biomedical science and research accessible to a diverse audience. Gairdner wants to reinforce its mission to inspire the next generation of researchers, thinkers and scientific leaders by providing public opportunities to engage with research. Gairdner will build on the momentum and success of public lectures with a further expanded series in 2019 that will be coast-to-coast for the first time.

The annual Awards Gala welcomed more than 500 guests from the research, academic, public and private sectors to the Royal Ontario Museum. Gairdner was honoured to have The Honourable Elizabeth Dowdeswell, Lieutenant Governor of Ontario address the audience, emphasizing government's role in supporting science and research in Canada and around the globe.

As we do each year, the Gairdner Foundation hosted international receptions in celebration of our laureates. Gairdner held these events in partnership with the University Health Network, MaRS, the Institute for Health Metrics and Evaluation at the University of Washington, Melbourne University, University of Cambridge, Humboldt-Universität zu Berlin, and the Canadian Embassies in Zagreb and Berlin. The receptions were a great success. Gairdner strengthened its international presence and established relationships that will expand our partnership opportunities, nominations and build our brand on the world stage.

Countless volunteers give their time and energy to further the Gairdner mission. I am very grateful to the members of our awards adjudication committees for their tireless efforts to select the world's most deserving scientists as Canada Gairdner Award laureates. I am also grateful for the volunteers at our many university partners who facilitate our National and Student Outreach program on their campuses. I'd also like to express my gratitude to our many sponsors and supporters, our Gairdner staff and Board of Directors who embody the Gairdner mission and whose hard work and dedication is the backbone of everything we do.

A handwritten signature in black ink that reads "J Rossant".

Dr. Janet Rossant, CC, PhD, FRS, FRSC
President and Scientific Director, Gairdner Foundation

2018 YEAR IN REVIEW

Report on 2018 Objectives

1. Increase the reach of the National and Student Outreach Program

- Increased number of universities hosting National Program lectures from 23 in 2017 to 24 in 2018
- Increased number of universities hosting Student Outreach lectures from 21 in 2017 to 22 in 2018
- Gairdner offered webcasting to all participating universities
- Gairdner hosted a regional lecture in New Brunswick, webcasting to other schools outside of the host city of Fredericton to engage them in Gairdner programming

2. Evaluate our National and Student Outreach Program

- Formalized reporting for universities hosting lectures; sent reporting requirements to partners in advance of their programming so they could accurately measure the metrics we require
- Shortened the amount of time between the event and reporting by implementing a comprehensive follow up strategy to get information sooner

3. Provide additional public-specific programming and materials

- In 2018, Gairdner hosted 9 public lectures as part of our 2018 Canada Gairdner Public Lecture Series
- Gairdner expanded our reach by hosting lectures in cities across Canada including Vancouver, Toronto, Montréal, and Sudbury

4. Increase brand recognition through enhanced social media presence

- Gairdner's partnership with Research2Reality flourished in 2018, producing four high-quality videos that have been used to promote the Foundation, its laureates and Canadian science
- Facebook: Page views increased by 126% during Gairdner Week in October
- Twitter: Gairdner has seen an increase in followers and mentions and continues to use Twitter to engage with our stakeholders, sponsors and media, with over 750 K impressions in the past year and over 400 new followers

5. Secure strategic partnerships that support Gairdner's programming and goals and raise its public profile

- Gairdner partnered with 3 existing and 5 new organizations in 2018, including Science World British Columbia, Life Sciences BC, Sick Kids Research Institute, Science North, Coeurs des sciences, Lung Cancer Canada, Ottawa Heart Research Institute, Canadian Student Health Research Forum and many others to expand the reach of the Gairdner brand and increase our impact

6. Continue to increase the number, quality and diversity of nominations

- In 2018, Gairdner received 48 new nominations for the Canada Gairdner International Award, 10 new nominations for the John Dirks Canada Gairdner Global Health Award and 12 new nominations for the Canada Gairdner Wightman Award
- Of the new nominations, 29% of nominations were for female scientists (Canada Gairdner International Award (21%), Canada Gairdner Wightman Award (42%) and John Dirks Canada Gairdner Global Health Award (52%))
- Gairdner also received nominations from 14 different countries around the world

7. Partner in a special symposium focusing on diversity in science

- During 2018 Gairdner engaged partners in the planning and sponsorship of a symposium with the event scheduled for September 30, 2019
- The first symposium will focus on women in science



"Science is an adventure....The Gairdner is a very special prize because it rewards us for exploring inner space, what goes on in our bodies.... this journey into inner space is so challenging and yet inspiring."

-Dr. Ed Boyden, 2018 Canada Gairdner International Award laureate

2018 CANADA GAIRDNER AWARD LAUREATES



(2018 Laureates listed below from left to right)

Dr. Peter Hegemann

Canada Gairdner International Award

"For the discovery of light-gated ion channel mechanisms, and for the discovery of optogenetics, a technology that has revolutionized neuroscience"

Dr. Karl Deisseroth

Canada Gairdner International Award

"For the discovery of light-gated ion channel mechanisms, and for the discovery of optogenetics, a technology that has revolutionized neuroscience"

Dr. Azim Surani

Canada Gairdner International Award

"For the discovery of mammalian genomic imprinting that causes parent-of-origin specific gene expression and its consequences for development and disease"

Dr. Edward S. Boyden

Canada Gairdner International Award

"For the discovery of light-gated ion channel mechanisms, and for the discovery of optogenetics, a technology that has revolutionized neuroscience"

Dr. Frances Shepherd

Canada Gairdner Wightman Award

"For her global leadership in oncology which has contributed significantly to improving survival outcomes of lung cancer patients worldwide"

Dr. Christopher Murray

John Dirks Canada Gairdner Global Health Award

"For ground-breaking work in conceptualizing and quantifying the Global Burden of Disease"

Dr. Alan Lopez

John Dirks Canada Gairdner Global Health Award

"For ground-breaking work in conceptualizing and quantifying the Global Burden of Disease"

Dr. Davor Solter

Canada Gairdner International Award

"For the discovery of mammalian genomic imprinting that causes parent-of-origin specific gene expression and its consequences for development and disease"

GAIRDNER'S 2018 STUDENT OUTREACH PROGRAM

As part of Gairdner's mission to inspire the next generation of researchers, the Foundation hosts outreach programming for high school students at partner universities from coast to coast. The lectures, which focus on each laureate's personal journey in research, serve to ignite a passion for science that we hope translates into increased enrolment in science programs at the post-secondary level. The lectures also give students the opportunity to interact with laureates and learn more about their career and accomplishments. Many laureates cite the Student Outreach Program as their favourite part of receiving the Canada Gairdner Award, and student response is uniformly enthusiastic.

In 2018, the Student Outreach Program reached over 3,300 students from 118 high schools at 22 partner universities

2018 Student Outreach Program			
Date	Location	Speaker	Lecture Title
February 1	Queen's University	Dr. Frank Plummer , 2016 Canada Gairdner Wightman Laureate, University of Manitoba	<i>A Career Dealing with Epidemics and Pandemics</i>
March 5	University of Prince Edward Island	Dr. Lewis Kay , 2017 Canada Gairdner International Laureate, University of Toronto	<i>Watching Proteins Dance Using Biophysics</i>
March 7	Dalhousie University	Dr. Lewis Kay	<i>Watching Proteins Dance Using Biophysics</i>
March 8	Lakehead University	Lea Harrington , Université de Montréal, Institute of Research in Immunology and Cancer (IRIC), Montréal, QC	
September 24	Université de Sherbrooke	Dr. Davor Solter , 2018 Canada Gairdner International Laureate, Max Planck Institute of Immunobiology and Epigenetics	<i>Embryos and stem cells</i>
October 19	University of Lethbridge	Dr. Azim Surani , 2018 Canada Gairdner International Laureate, University of Cambridge	<i>Out of Africa to a career in science</i>
October 19	Université Laval	Dr. Peter Hegemann , 2018 Canada Gairdner International Laureate, University of Berlin	<i>How can a Small Algal Eye serve our Understanding of the Brain</i>
October 22	University of Alberta	Dr. Edward Boyden , 2018 Canada Gairdner International Laureate, MIT	<i>Engineering Serendipity: The Path to Discovering How to Map and Repair Brain Circuits With Light</i>
		Dr. Davor Solter	<i>Embryos and stem cells</i>
October 22	University of British Columbia	Dr. Azim Surani , 2018 Canada Gairdner International Laureate, University of Cambridge	<i>Out of Africa to a career in science</i>
		Dr. Christopher Murray , 2018 John Dirks Canada Gairdner Global Health Laureate, University of Washington	<i>How to pursue your big questions through a career in science.</i>

October 22	Western University	Dr. Alan Lopez , 2018 John Dirks Canada Gairdner Global Health Laureate, University of Melbourne	<i>Science and scientific collaboration in global health: how can we ensure a healthier world</i>
October 22	McGill University	Dr. Peter Hegemann	<i>How can a Small Algal Eye serve our Understanding of the Brain</i>
October 23	University of Winnipeg	Dr. Karl Deisseroth , 2018 Canada Gairdner International Laureate, Howard Hughes Medical Institute	<i>Illuminating the Brain</i>
October 23	Carleton University	Dr. Lewis Kay	<i>Watching Proteins Dance Using Biophysics</i>
October 23	Université de Montréal	Dr. Peter Hegemann	<i>How can a Small Algal Eye serve our Understanding of the Brain</i>
October 23	University of Calgary	Dr. Edward Boyden Dr. Davor Solter	<i>Engineering Serendipity: The Path to Discovering How to Map and Repair Brain Circuits With Light</i> <i>Embryos and stem cells</i>
October 23	University of Waterloo	Dr. King Holmes , 2013 John Dirks Canada Gairdner Global Health Laureate, University of Washington	<i>Choose an area you can work in for the rest of your life</i>
October 23	University of Saskatchewan	Dr. John B. Gordon , Professor, University of Saskatchewan	<i>Can we Really Cure Allergies: Adventures in cell therapy</i>
October 24	York University	Nada Jabado , Professor, McGill University	<i>Oncohistones in cancer: How to turn a cell's symphony into non-harmonic rap</i>
October 24	Queen's University	Dr. Rodolphe Barrangou , 2016 Canada Gairdner International Laureate, North Carolina State University, Raleigh, NC	<i>The Many Hat Scientists Wear</i>
October 26	University of Toronto	Dr. Frances Shepherd , 2018 Canada Gairdner Wightman Laureate, University of Toronto Dr. Rodolphe Barrangou , 2016 Canada Gairdner International Laureate, North Carolina State University, Raleigh, NC	<i>Forging a Career in Cancer Research</i> <i>The Many Hat Scientists Wear</i>
November 7	University of New Brunswick	Dr. Frances Shepherd	<i>Forging a Career in Cancer Research</i>
November 12	Memorial University	Dr. Lewis Cantley , 2015 Canada Gairdner International Laureate, Weill Cornell Medical College	<i>Insulin, obesity and cancer: The PI3K connection</i>



Student Impact: High School Student

"Thank you for the opportunity to attend yesterday's Gairdner event. It was not only inspiring but also empowering to listen to the stories of renowned researchers from across the world. As an aspiring researcher myself, much of their trials and tribulations resonated with me, and it was incredible to hear their success stories!"

PROGRAM HIGHLIGHTS:

LAURENTIAN UNIVERSITY: In March of 2018, The Gairdner Foundation partnered with Science North in Sudbury, Ontario to provide a pilot program for Indigenous students in Northern Ontario. In addition to the traditional student outreach program lecture, students were engaged in a public lecture by Dr. David Julius on Somatosensation and then were invited to spend the night at Science North to participate in science-related activities overnight. Students were bused in from surrounding areas to participate in the program which gave Indigenous students access to compelling science and hands on learning experience.

UNIVERSITY OF BRITISH COLUMBIA: The outreach program at UBC continues to be a highlight for the laureates who get to participate. In 2018, the President of UBC, Dr. Santa Ono hosted a dinner for our Gairdner laureates and 35 leaders from the UBC community at his private residence on Sunday, October 21. This was a prime networking opportunity for our laureates to meet the local leaders in Vancouver.

On Monday, October 22, both of our laureates spoke to 200 high school students who came from surrounding schools, some who travelled more than 4 hours to attend. After the student lecture the laureates had an opportunity to meet with scientists from UBC who are involved in a similar field for them to share their work. During lunch, laureates each met with a separate group of 25 PhD students who were interested in the laureates' field of work. After lunch both laureates gave their national lecture to 350 attendees including faculty, trainees, postdocs and students from UBC, SFU and the local Vancouver area. The program at UBC is robust and impactful for our laureates and the stakeholders in Vancouver.

GAIRDNER'S 2018 NATIONAL PROGRAM

Gairdner's National Program is a dynamic and interactive speaker series that brings current and past Canada Gairdner Award laureates to Canada to speak to faculty members and trainees about their research. The Gairdner Foundation celebrates biomedical science research from coast to coast and prides itself on giving Canadians access to scientists from around the world. The National Program has a profound impact on Canadian science culture and innovation. It is the only program of its kind in the world of major awards.

In 2018, Gairdner's National Program reached over 3,600 people at 24 universities

National Program Lectures			
Date	Location	Speaker	Lecture Title
February 1	Queen's University	Dr. Frank Plummer , 2016 Canada Gairdner Wightman Laureate, University of Manitoba	<i>Untold Stories of the National Microbiology Laboratory</i>
March 5	University of Prince Edward Island	Dr. Lewis Kay , 2017 Canada Gairdner International Laureate, University of Toronto	<i>NMR Why Bother? Studies of the p97 Molecular Machine Provide an Answer</i>
March 7	Dalhousie University	Dr. Lewis Kay	<i>NMR Why Bother? Studies of the p97 Molecular Machine Provide an Answer</i>
March 8	Lakehead University	Lea Harrington , Université de Montréal, Institute of Research in Immunology and Cancer (IRIC), Montréal, QC	<i>Chromatin and stem cell fate are impacted globally by short telomeres</i>
September 24	Université de Sherbrooke	Dr. Davor Solter , 2018 Canada Gairdner International Laureate, Max Planck Institute of Immunobiology and Epigenetics	<i>Epigenetic control of early mammalian development</i>
October 19	University of Lethbridge	Dr. Azim Surani , 2018 Canada Gairdner International Laureate, University of Cambridge	<i>From genomic imprinting to the human germline</i>
October 19	Université Laval	Dr. Peter Hegemann , 2018 Canada Gairdner International Laureate, University of Berlin	<i>From the Microalga Chlamydomonas to Brain Optogenetics</i>
October 22	University of Alberta	Dr. Edward Boyden , 2018 Canada Gairdner International Laureate, MIT Dr. Davor Solter	<i>Optical and Molecular Tools for Analyzing and Controlling Brain Circuits</i> <i>Epigenetic control of early mammalian development</i>
October 22	University of British Columbia	Dr. Azim Surani , 2018 Canada Gairdner International Laureate, University of Cambridge Dr. Christopher Murray , 2018 John Dirks Canada Gairdner Global Health Laureate, University of Washington	<i>From genomic imprinting to the human germline</i> <i>Measuring population health: 25 years of the Global Burden of Disease Study</i>
October 22	Western University	Dr. Alan Lopez , 2018 John Dirks Canada Gairdner Global Health Laureate, University of Melbourne	<i>Strengthening the evidence base for health policy: the Global Burden of Disease Study</i>
October 22	McGill University	Dr. Peter Hegemann	<i>From the Microalga Chlamydomonas to Brain Optogenetics</i>
October 23	University of Manitoba	Dr. Karl Deisseroth , 2018 Canada Gairdner International Laureate, Howard Hughes Medical Institute	<i>Discovery of Optogenetics and Development of Causal Systems Neuroscience</i>

October 23	Université de Montréal	Dr. Peter Hegemann	<i>From the Microalga Chlamydomonas to Brain Optogenetics</i>
October 23	University of Calgary	Dr. Edward Boyden Dr. Davor Solter	<i>Optical and Molecular Tools for Analyzing and Controlling Brain Circuits</i> <i>Epigenetic control of early mammalian development</i>
October 23	University of Waterloo	Dr. King Holmes , 2013 John Dirks Canada Gairdner Global Health Laureate, University of Washington	<i>The Evolution of the Global Health Field & Priorities for the Future</i>
October 23	University of Ottawa	Dr. Lewis Kay Dr. Alan Lopez	<i>NMR Why Bother? Studies of the p97 Molecular Machine Provide an Answer</i> <i>Strengthening the evidence base for health policy: the Global Burden of Disease Study</i>
October 24	McMaster University	Dr. King Holmes	<i>The Escalating Threats of AMR and Climate Change & Their Significance for the Field of Infectious Diseases</i>
October 24	York University	Dr. Lewis Kay Nada Jabado , Professor, McGill University	<i>NMR Why Bother? Studies of the p97 Molecular Machine Provide an Answer</i>
October 24	Queen's University	Dr. Rodolphe Barrangou , 2016 Canada Gairdner International Laureate, North Carolina State University, Raleigh, NC	<i>CRISPR-Cas9 Systems: From Adaptive Immunity to Genome Editing</i>
October 24	University of Guelph	Dr. Azim Surani	<i>From genomic imprinting to the human germline</i>
October 24	Concordia University	Dr. Peter Hegemann	<i>From the Microalga Chlamydomonas to Brain Optogenetics</i>
October 26	University of Toronto	Lectures by all 8 Laureates	<i>See details next page</i>
November 7	University of New Brunswick	Dr. Frances Shepherd	<i>A Journey From Nihilism to Hope Through Bench to Bedside Research and Back to the Bench Again</i>
November 12	Memorial University	Dr. Lewis Cantley , 2015 Canada Gairdner International Laureate, Weill Cornell Medical College	<i>Insulin, obesity and cancer: The PI3K connection</i>

Laureate Impact: Dr. Ed Boyden, 2017 Canada Gairdner International Award laureate

"Winning a Gairdner was a dream come true. And even better than the dream was the opportunity to engage with students from across the country and tell them my story."

”

2018 Canada Gairdner Laureates' Lecture: Thursday, October 25, 2018 MacLeod Auditorium, University of Toronto		
Time	Speaker(s)	Session/presentation title
9:00– 9:05 a.m.	Janet Rossant , President & Scientific Director, The Gairdner Foundation	<i>Opening Session – Welcome & Chair's Remarks</i>
9:05– 9:35 a.m.	Dr. Peter Hegemann , Hertie Professor for Neurosciences, Experimental Biophysics, Department of Biology, Humboldt-Universität zu Berlin	<i>Out of the wild, green yonder: From the Microalga Chlamydomonas to Brain Optogenetics</i>
9:35 – 10:05 a.m.	Dr. Karl Deisseroth , D.H. Chen Professor of Bioengineering and Psychiatry, Stanford University; Investigator, Howard Hughes Medical Institute	<i>Discovery of Optogenetics and Development of Causal Systems Neuroscience</i>
9:05– 10:20 a.m.	Health Break	
10:20– 10:50 a.m.	Dr. Edward Boyden , Y. Eva Tan Professor in Neurotechnology, Professor, Departments of Biological Engineering and Brain and Cognitive Sciences, Media Lab and McGovern Institute, MIT	<i>Optical and Molecular tools for analyzing and controlling brain circuits</i>
10:50 – 11:20 a.m.	Dr. Davor Solter , Emeritus Member and Director, Max Planck Institute of Immunology and Epigenetics; Visiting International Professor, Siriraj Centre for Excellence in Stem Cell Research, Mahidol University; Visiting Professor, University of Zagreb Medical School	<i>Imprinting: Then and Now</i>
11:20 – 11:55 a.m.	Dr. Azim Surani , Director of Germline and Epigenetics Research, Wellcome Trust Cancer Research UK Gurdon Institute; Marshall-Walton Professor, University of Cambridge	<i>From genomic imprinting to the human germline</i>
11:55-1:10 p.m.	Lunch Break	
1:10- 1:15 p.m.	Alan Bernstein , President & CEO, CIFAR	<i>Chair's Remarks</i>
1:15 – 2:00 p.m.	Dr. Christopher Murray , Director of the Institute for Health Metrics and Evaluation (IHME); Professor of Global Health, University of Washington Dr. Alan Lopez, Melbourne Laureate Professor, Rowden-White Chair of Global Health and Burden of Disease Measurement, University of Melbourne	<i>Measuring population health: The Global Burden of Disease Study</i> <i>Strengthening the evidence base for health policy: the Global Burden of Disease Study</i>
2:00– 2:30 p.m.	Dr. Frances Shepherd , Medical Oncologist, Princess Margaret Cancer Care Centre, University Health Network; Professor of Medicine, University of Toronto	<i>A Journey from Nihilism to Hope Through Bench to Bedside Research and Back to the Bench Again</i>
2:30 p.m.	Dr. Janet Rossant	<i>Thanks & concluding remarks</i>
Total Attendance Laureates' Lecture		500

2018 Canada Gairdner Research Symposium: Let there be Light: Optogenetics in Neuroscience and Beyond: Wednesday, October 24, 2018 MacLeod Auditorium, University of Toronto		
Time	Speaker	Titles
9:00 – 9:10 a.m.	Janet Rossant , President & Scientific Director, The Gairdner Foundation, Toronto, Ontario	<i>Opening Session – Welcome Remarks</i>
9:10– 9:15 a.m.	Kate Williams , Scientific Director, Krembil Foundation	<i>Chair's remarks</i>
9:15 – 9:50 a.m.	Dr. Leslie Vosshall , Robin Chemers Neustein Professor; Head of the Laboratory of Neurogenetics and Behavior; Director, Kavli Neural Systems Institute, The Rockefeller University, New York, NY, USA	<i>Thirsty for Blood: How mosquitoes hunt humans and how we can stop them</i>
9:50 – 10:25 a.m.	Dr. Hailan Hu , Professor, Senior Investigator, Zhejiang University Hangzhou, China	<i>Rapid antidepressant mechanism of ketamine</i>
10:25 – 11:00 a.m.	Dr. Dan Yan , Paul Licht Distinguished Professor in Biology; Investigator, Howard Hughes Medical Institute, University of California Berkeley, CA	<i>Neural circuits controlling sleep</i>
11:15 – 11:20 a.m.	Kate Williams , Scientific Director, Krembil Foundation	<i>Chair's remarks</i>
11:20– 11:55 a.m.	Dr. Susumu Tonegawa , Picower Professor of Biology and Neuroscience; Director, RIKEN-MIT Center for Neural Circuit Genetics; Principal Investigator, HHMI; Principal Investigator, Tonegawa Lab at MIT, Cambridge, MA	<i>The Power of Optogenetics in Memory Research</i>
11:55–12:30 p.m.	Dr. Jared Toettcher , Assistant Professor of Molecular Biology, Princeton University Princeton, NJ, USA	<i>Intracellular Optogenetics: Moving proteins and assembling organelles to program cell behaviour</i>
12:30- 1:05 p.m.	Dr. Sheena Josselyn , Senior Scientist, Neurosciences & Mental Health, Hospital for Sick Children, Toronto	<i>Making and breaking memories</i>
1:05- 1:10 p.m.	Dr. Janet Rossant	<i>Concluding Remarks</i>
Total Attendance Optogenetics Lecture		350
Total Webcast subscribers		318

ADDITIONAL GAIRDNER PROGRAMMING ACROSS CANADA

Canada Gairdner Symposium – Canada and Global Public Health: Moving from Strategy to Action

June 12, 2018

University of Manitoba, Winnipeg, Manitoba

Attendance: 120

The conference featured Cesar Victora, 2017 John Dirks Canada Gairdner Global Health Laureate and leaders in global public health from across Canada and internationally to present and discuss key issues in global public health and identify ways in which Canada can move from strategy to action.

31st Canadian Student Health Research Forum (CSHRF) and Gairdner Symposium

June 14-15, 2018

University of Manitoba, Winnipeg, Manitoba

Attendance: 360

CSHRF provides a venue for health research trainees from across Canada to present their work, network and be recognized for the excellence of their contributions. It also features research poster days, awards of excellence, tours and social events as well as a symposium on a cross-disciplinary scientific theme by some of the world's leading scientists in that field. As part of CSHRF, Gairdner hosted a full day symposium featuring Gairdner speakers: Dr. Cheryl Rockman-Greenberg, Dr. Victor Ling, Dr. Dan Durocher, Dr. Jeff Weitz and Dr. Janet Rossant.

Winners of the poster presentation attended the Canada Gairdner Awards Gala as honoured guests. They included: Elizabeth Wall-Wieler, University of Manitoba; Ania Bogoslawski, University of Calgary; Christopher Hart, University of Manitoba and Melissa Galati, University of Toronto. Catia Perciani, University of Toronto, was unable to attend the Gala.

Canada Gairdner Symposium – Closing the Genomics Research Gap

June 15-17, 2018

McGill University, Montréal, Québec

Attendance: Symposium 140; Training Courses 75

A symposium about inequalities in Genomics Research and Health, and what to do about them, featuring a training course, public lectures (with simultaneous translation in English and French – see below) and two full days of scientific sessions. Topics included 'Studies in large and diverse cohorts', 'Statistical and population genetics', 'Addressing pervasive sampling biases', 'Clinical applications & health disparities' and 'Community engagement'.

Canada Gairdner Global Health Symposium - GBD and Reaching the Sustainable Development Goals

October 24, 2018, Toronto, Ontario

Attendance: 200 in person and 45 on webcast

The Gairdner Foundation in collaboration with SickKids Centre for Global Child Health, Dalla Lana School of Public Health and Grand Challenges Canada presented a day-long symposium on the impact of the Global Burden of Disease study and a discussion on reaching the Sustainable Development Goals.

Distinguished Speakers: Dr. Christopher J.L. Murray and Dr. Alan D. Lopez

2018 John Dirks Canada Gairdner Global Health Award Winners, Co-Founders of the Global Burden of Disease (GBD) Study

Panelists: Dr. Nadia Akseer, SickKids Centre for Global Child Health; Dalla Lana School of Public Health, University of Toronto, Dr. James Blanchard, University of Manitoba, Dr. Pamela Y. Collins, University of Washington, Dr. Janet Rossant, President, Gairdner Foundation, Dr. Stanley Zlotkin, Chief, SickKids Centre for Global Child Health

Canada Gairdner Symposium - Precision Health: From Data to Wellness

November 15-16, 2018

University of Alberta, Edmonton, Alberta

Attendance: 200

An annual Research Symposium which featured cutting-edge themes in fundamental research impacting human health and highlighting recent discoveries and developments that are transforming current treatment paradigms into a more data-centred and patient-specific approach.

Distinguished Speakers: Oksana Suchowersky, Professor, Department of Medicine, University of Alberta, Co-lead of Alberta Precision Health Strategy, Janet Rossant, President & Scientific Director, Gairdner Foundation, Chief of Research Emeritus, Hospital for Sick Children, Toronto.

Canada Gairdner Symposium - Changing Medicine Forever: Focused Ultrasound- A New Frontier for Brain Therapy

November 21, 2018

Koerner Hall, Toronto, Ontario

Attendance: 350

The Gairdner Foundation and Sunnybrook Research Institute partnered to bring the world's leading scientists together for a state-of-the-field symposium on this new frontier of brain therapy, which has the capacity to treat brain diseases where few or no options exist. The event featured a public lecture (see below) followed by a full day symposium.

Distinguished Speaker: Dr. Cori Bargmann, Neuroscientists and President of Science, The Chan Zuckerberg Initiative

Canada Gairdner Symposium– Big Data for Health: Expectation, Opportunity, Impact

November 30, 2018

University of Calgary, Calgary, Alberta

Attendance: 365

An ever-expanding volume of data, the need to link data from disparate sources, and the increasing complexity of research design is radically changing biomedical, clinical and health services, and population health research. "Big data" approaches involve the theory and methodology of data analysis and data science, and sociological understanding and ethical management of these developments must advance synchronously to ensure sound application in medicine and health.

Distinguished Speaker: Dr. Alan D. Lopez, 2018 John Dirks Canada Gairdner Global Health Award.

Featured Speakers: Professor Gina Neff, Senior Research Fellow and Associate Professor, the Oxford Internet Institute & Department of Sociology with Oxford University, and Eyal Oren, Product Manager with Google AI.

2018 Public Lectures

2018 Canada Gairdner Public Lecture Series presented by TELUS Health

After piloting public lectures in 2017, Gairdner developed a public lecture series of 4 public lectures in conjunction with TELUS Health.

Peppers, Peppermints and Pit Vipers: Unlocking the Mysteries of Chronic Pain with Natural Products

March 22, 2018

Science North, Sudbury, Ontario

Attendance: 200

A discussion of how an understanding of somatosensation using natural elements can lead to better treatments for chronic pain.

Featuring Dr. David Julius, 2017 Canada Gairdner International Award Laureate, Professor & Chair, Department of Physiology; Morris Herzstein Chair in Molecular Biology and Medicine, University of California San Francisco

Bienvenue au monde de crispr! (*French language public lecture)

October 10, 2018

Coeur des sciences, Université du Québec à Montréal, Montréal, Québec

Attendance: 200

Featuring Dr. Rodolphe Barrangou, Associate Professor, Department of Food, Bioprocessing and Nutrition Sciences; Todd R. Klaenhammer Distinguished Scholar in Probiotics Research North Carolina State University.

Lung Cancer: A Journey from Nihilism to Hope – Celebrating Leadership in Cancer Research

November 6, 2018

Globe & Mail Centre, Toronto, Ontario

Attendance: 75

A public talk about the changing therapies in lung cancer, a career spent developing these new therapies and the important issue of access to proper care for patients.

Featuring: Dr. Frances Shepherd, 2018 Canada Gairdner Wightman Award laureate, Medical Oncologist, Princess Margaret Cancer Centre with André Picard, Health Reporter, Globe and Mail in conversation with Christina Sit, Lung Cancer Canada and a lung cancer patient

Precision Medicine: How Science is changing the Future of Medicine

November 15, 2018

Science World at TELUS World of Science, Vancouver, British Columbia

Attendance: 175

A lecture on new, innovative approaches to medicine that are changing the way patients are diagnosed and treated worldwide: A discussion on the advent of CRISPR-Cas 9 gene editing and its powerful implications for industry, the scientific community and commercialization.

Featuring: Dr. Janet Rossant, President & Scientific Director, Gairdner Foundation, Chief of Research Emeritus, Sick Kids Research Institute and Dr. Victor, Dzau, President, National Academy of Medicine

Other Public Lectures

Ottawa Heart Conference Public Lecture - Precision Medicine in Cardiovascular Disease

April 26, 2018

Ottawa, Ontario

Attendance: 150

A public talk on Precision Medicine in Cardiovascular Disease and recent advancements and breakthroughs in preventing and treating cardiovascular disease in a precise targeted manner.

Featuring: Dr. Victor, Dzau, President, National Academy of Medicine

Canada Gairdner Global Health Public Lecture - Food for 9.7 billion People

May 4, 2018

Western University, London, Ontario

Attendance: 200 in attendance and 45 on webcast

A public lecture at Western University in partnership with the Lawson Health Research Institute covering dynamic areas of research that are collectively impacting society and human well-being.

Featuring: Rob Vos, Director Markets, Trade and Institutions, International Food Policy Research Institute, Washington, DC.

Health and History in our DNA

June 15, 2018

McGill University, Montréal, Québec

Attendance: 150

An evening of public lectures about genomes, history and medicine in conjunction with the 'Closing the Genomics Research Gap' Symposium. Featuring two public lectures with simultaneous translation in French and English "Histoire des populations et recherche biomédicale" by Dr. Lluís Quintana-Murci (Institut Pasteur, Paris) and "Cultural contexts for genetic information gathering with Australian Aboriginal Communities" featuring Mrs. Azure Hermes (Indigenous Community Engagement Coordinator, Australian National University (ANU)) and Simon Eastel (Research Professor, John Curtin School of Medical Research, ANU). - (note that the original lecture "Ancestry, Health and DNA" by Dr. Joanna Mountain was replaced due to speaker cancellation)

Robots to Assess Brain Dysfunction: will sure and steady win the race?

October 24, 2018

MaRs Discovery District, Toronto, Ontario

Attendance: 45

MarS Gairdner talk featuring Dr. Stephen Scott, GSK Chair in Neuroscience and Professor in the Department of Biomedical and Molecular Sciences at Queen's University. A talk on Dr. Scott's robotic device which is being used to increase the understanding of the role the brain plays in arm and leg movement, and its commercial applications.

The Journey from Scientific Study to Impact

November 20, 2018

Koerner Hall, Toronto, Ontario

Attendance: 350

The Gairdner Foundation and Sunnybrook Research Institute partnered to bring the world's leading scientists together for a state-of-the-field symposium (Changing Medicine Forever: Focused Ultrasound- A New Frontier for Brain Therapy), which included a public lecture.

Distinguished Speakers:

Dr. Brian Greene, Professor, Theoretical Physics, Columbia University
Breakthrough thinking that changes the world/why science matters

Alan Alda, Actor and Advocate for Science Communications
Innovation and science matter- but you have to get the message out there!

2018 Canada Gairdner Awards Gala

October 25, 2018

Royal Ontario Museum, Toronto, Ontario

Attendance: 540

An evening celebration of the 2018 Canada Gairdner Awardees. Attendees represented leadership from government, health care and corporate Canada. The Honourable Elizabeth Dowdeswell, Lieutenant Governor of Ontario addressed the audience and brought greetings on behalf of the Government of Ontario. In 2018, Gairdner increased the number of students in attendance to 50 in pursuit of its goal of inspiring the next generation of leaders, thinkers and innovators.

GAIRDNER THANKS ITS 2018 SUPPORTERS

The Gairdner Foundation thanks its supporters for making our coast-to-coast programming possible.



Harry & Evelyn Rosen
Burroughs Wellcome Fund
Merck Canada Inc.
OICR

University Health Network
Krembil Foundation
Power Corporation of
Canada
Western University

Mitchell and Kathryn Baran
Family Foundation

THE YEAR AHEAD: OBJECTIVES FOR 2019

The Canada Gairdner Awards have a long, successful record of accomplishment and Gairdner's National and Student Outreach programs are mature and stable. In 2019 and beyond, Gairdner will focus on increasing the reach of our programs and bringing extraordinary science to new demographics including the general public and groups that are underrepresented in the scientific arena including but not limited to women and members of the indigenous community. In addition, Gairdner will continue to work with its university partners to evaluate our lecture programs and use the feedback to improve our offerings to ensure they are relevant, focused and meaningful.

Revised Performance Goals for 2019

- 1. Increase the reach of the National and Student Outreach Program**
 - In 2019, Gairdner will seek to bring more attendees into its lectures by hosting regional lectures and providing webcast lectures to remote and rural communities (Northern Ontario, Québec, Alberta, Saskatchewan and British Columbia).
- 2. Provide additional public-specific programming and materials**
 - Gairdner will build off its success in 2018 to provide enhanced programming for the public including webcasted lectures, public lectures and accessible content on social media.
- 3. Increase brand recognition through enhanced social media presence**
 - Gairdner will continue to build its social following on Twitter and Facebook. It will also continue a video partnership with Research2Reality that will produce high quality, engaging content for followers.
- 4. Secure strategic partnerships that support Gairdner's programming and goals and raise its public profile**
 - Gairdner will expand its partnerships to include additional scientific organizations in Canada including TELUS Spark in Calgary, Discovery Centre in Halifax and TELUS World of Science in Vancouver.
- 5. Continue to increase the number, quality and diversity of nominations**
 - Gairdner will build on its momentum from 2018 and proactively seek nominations from around the globe to increase the diversity of our nominations. Gairdner will engage in strategic partnerships to encourage nominations, will promote the nominations process at all its international receptions and continue to engage in outreach to increase the volume of nominations it receives in 2019.
- 6. Partner in a special symposium focusing on diversity in science**
 - In an effort to promote science to under-represented groups, Gairdner will host a 'diversity in science' symposium to showcase the work of scientists from a variety of backgrounds. Gairdner will also cultivate partnerships with Indigenous organizations to help develop focused programming for the community.

GOVERNANCE

The Gairdner Foundation is governed by a 16 member Board of Directors. The Board is comprised of individuals who bring their expertise from the academic, private and public sectors. Board members are nominated and appointed for a maximum term of 3 years, renewable 3 times. Directors are not compensated for their regular board and committee duties.

The Board is responsible for overseeing the management of the organization, and through its committees, conducts detailed examinations of issues and opportunities. The Directors provide strategic insight and leadership, as well as effective governance for the Foundation and work diligently to maintain and extend the capacity of the Foundation to achieve its goals.

The Board meets a minimum of twice each year. Directors of the Board take their role seriously and to the best of their ability, strive to be active participants in all Board and Committee meetings. During 2018, the Board met three times.

2018 Board of Directors

Dr. D. Lorne Tyrrell

Board Chair
Director, Li Ka Shing Institute of Virology
Edmonton, AB

Dr. Victor Dzau

President, Institute of Medicine,
National Academy of Sciences
North Carolina

Brandt C. Louie

Chairman and CEO, H.Y. Louie Co. Limited
Chair, London Drugs Limited
Vancouver, BC

Ann McCaig

Chancellor Emeritus, University of Calgary
Calgary, AB

Bren Gairdner

Director
Calgary, AB

John Risley

President, Clearwater Fine Foods Inc.
Chester, NS

Melissa Todd

Director
Waterloo, ON

Connie Sugiyama

President, ConMark Strategy Inc
Toronto, ON

Heather Munroe-Blum

Board Vice-Chair
Principal Emeritus, McGill University
Montreal, QC

Dr. Calvin Stiller

Emeritus Professor, Western University,
Board Chair OICR
London, ON

Darren Entwistle

President & CEO, TELUS
Vancouver, BC

Eric Newell

Chancellor Emeritus, University of Alberta
Edmonton, AB

Mark Lievonon

Director
Toronto, ON

Michael Horgan

Senior Advisor, Bennett Jones LLP
Former Deputy Minister, Finance
Ottawa, ON

John Upton

Director
Vancouver, BC

George Cooper

Former Member of Parliament
Halifax, NS

Standing Committees of the Board of Directors		
Standing Committee	Members	Number of meetings/year
Executive Committee	Lorne Tyrrell, Chair Cal Stiller Heather Munroe-Blum Bren Gairdner	As required
Audit Committee	Eric Newell, Chair John Upton Michael Horgan Melissa Todd Mark Lievonon	2-3
Investment Committee	Brandt C. Louie, Chair Cal Stiller Eric Newell Bren Gairdner Connie Sugiyama John Risley	4
Governance and Nominating Committee	Michael Horgan, Chair Heather Munroe-Blum John Upton Call Stiller	2
Fundraising Committee	John Risley, Chair Darren Entwistle Heather Munroe-Blum Ann McCaig George Cooper	4

2018 Gairdner Foundation Committees (For selection of 2018 laureates)

Medical Review Panel

Lea Harrington

Professor, Department of Medicine, Université de Montréal; Visiting Professor, Wellcome Trust, University of Edinburgh; Montréal, QC

Jeffrey Weitz

Executive Director, Thrombosis & Atherosclerosis Research Institute, McMaster University, Hamilton, ON

Sonia Anand

Professor, Department of Medicine, McMaster University, Hamilton, ON

David Andrews

Director, Biological Sciences, Sunnybrook Research Institute, Toronto, ON

Barbara Ballermann

Professor & Chair, Department of Medicine, University of Alberta, Edmonton, AB

Steffany Bennett

Professor, Department of Biochemistry, Microbiology and Immunology, University of Ottawa, Ottawa, ON

Jacques Côté

Professor, Dept. of Molecular Biology, Medical Biochemistry & Pathology, Université Laval, Québec City, QC

Daniel Durocher

Senior Investigator, Samuel Lunenfeld Research Institute, Mount Sinai Hospital, Toronto, ON

Anne-Claude Gingras

Senior Investigator
Lunenfeld-Tanenbaum Research Institute
Toronto, ON

John R. Gordon

Co-chair, Immunology Research Group, University of Saskatchewan, Saskatoon, SK

Gillian Hawker

Sir John and Lady Eaton Professor & Chair,
Department of Medicine, University of Toronto,
Toronto, ON

Geoff Hicks

Director, Regenerative Medicine, Manitoba Institute of Cell Biology, University of Manitoba, Winnipeg, MB

Stephen Jones

Associate Director & Head, Bioinformatics, Genome Sciences Centre, British Columbia Cancer Research Centre, Vancouver, BC

Pauline Johnson

Department of Microbiology & Immunology,
University of British Columbia, Vancouver, BC

Sheena Josselyn

Senior Scientist, Neurosciences & Mental Health
Hospital for Sick Children
Toronto, ON

Gary Kobinger

Director, Centre de recherche en infectiologie,
Université Laval, Québec City, QC

Dale Laird

Professor & Canada Research Chair in Gap Junctions and Disease, Schulich School of Medicine, University of Western Ontario, London, ON

Paola Marcato

Assistant Professor, Department of Pathology,
Dalhousie University, Halifax, NS

Brad Nelson

Director and Distinguished Scientist, Deeley
Research Centre, BC Cancer Research Centre
Vancouver, BC

Adrian Owen

Canada Excellence Research Chair in Cognitive Neuroscience and Imaging, The Brain and Mind Institute, Western University, London, ON

Lynne-Marie Postovit

Co-Director, Basic Research, Cancer Research
Institute of Northern Alberta, University of Alberta,
Edmonton, AB

Michel Tremblay

Professor, Department of Biochemistry, McGill
University, Montréal, QC

Raymund J. Wellinger

Head, Department of Microbiology & Infectious
Diseases, Faculty of Medicine, Université de
Sherbrooke, Sherbrooke, QC

Gerry Wright

Professor, Biochemistry and Biomedical Sciences
Director, Michael G. DeGroote Institute for Infectious
Disease Research, McMaster University
Hamilton, ON

Terry-Lynn Young

Associate Professor, Faculty of Medicine Genetics,
Memorial University, St. John's, NL

Gerald Zamponi

Professor, Cumming School of Medicine, University
of Calgary, Calgary, AB

Peter Zandstra

Professor, Donnelly Centre for Cellular & Biomolecular Research, University of Toronto, Toronto, ON

Medical Advisory Board**Janet Rossant, Chair**

President and Scientific Director, Gairdner Foundation, Toronto, ON

Lea Harrington, Co-Chair, MRP

Professor, Department of Medicine, Université de Montréal; Visiting Professor, Wellcome Trust, University of Edinburgh; Montréal, QC

Jeffrey Weitz, Co-Chair, MRP

Executive Director, Thrombosis & Atherosclerosis Research Institute, McMaster University, Hamilton, ON

Adrian Bird

Buchanan Chair of Genetics, University of Edinburgh, Director, Wellcome Trust Centre for Cell Biology, Edinburgh, UK

Michel Bouvier

Professor, Biochemistry and Molecular Medicine, Principal investigator, Institute for Research in Immunology and Cancer, Université de Montréal Montreal, QC

Pascale Cossart

Distinguished Professor, Institut Pasteur, Paris, France

Jeffrey Friedman

Marilyn M. Simpson Professor, Laboratory of Molecular Genetics, Rockefeller University, New York, NY

Susan Gasser

Director, Friedrich Miescher Institute, Basel, Switzerland

Jan Hoeijmakers

Professor, Molecular Genetics, Erasmus University Rotterdam, Rotterdam, Netherlands

Arthur Horwich

Professor, Yale School of Medicine, New Haven, CT

Herbert Jäcke

Director, Max Planck Institute for Biophysical Chemistry, Göttingen, Germany

Thomas Jessell

Co-Director, Kavli Institute for Brain Science, Columbia University, New York, NY

Fabienne MacKay

Head, School of Biomedical Sciences, University of Melbourne, Victoria, Australia

Patrick Maxwell

Regius Professor Physic, University of Cambridge, Cambridge, UK

Kazutoshi Mori

Professor, Department of Biophysics, Graduate School of Science, Kyoto University, Kyoto, Japan

Jeffrey Ravetch

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Peter Ratcliffe

Director of Clinical Research, Francis Crick Institute, Director, Target Discovery Institute at the University of Oxford, London, UK

Randy Schekman

Professor, Department of Molecular & Cell Biology, University of California Berkeley, Berkeley, CA

Michael Salter

Chief of Research, Hospital for Sick Children (SickKids), Toronto, ON

Steven Scott

GSK Chair in Neuroscience, Centre for Neuroscience Studies, Queen's University, Kingston, ON

Jim Woodgett

Director, Lunenfeld-Tanenbaum Research Institute, Mt. Sinai Hospital, Toronto, ON

Richard Wozniak

Professor, Department of Cell Biology, University of Alberta, Edmonton, AB

Wightman Award Advisory Committee

Janet Rossant, Chair

President and Scientific Director, The Gairdner Foundation, Toronto, ON

Alistair Buchan

Dean of Medicine & Professor of Stroke Medicine, University of Oxford, Oxford, UK

Stephen Collins

Associate Dean, Faculty of Health Sciences, McMaster University, Hamilton, ON

David Eidelman

Vice President (Health Affairs) & Dean, Faculty of Medicine, McGill University, Montreal, QC

Marie-Josée Hebert

Vice-Rector of Research, Discovery, Creation and Innovation, Université de Montréal, Montréal, QC

John Hepburn

Vice-President Research, CIFAR, Toronto, ON; Vancouver, BC

Mona Nemer

Vice-President (Research), University of Ottawa, Ottawa, ON

Frank Plummer

Distinguished Professor, Medical Microbiology, College of Medicine, Faculty of Health Sciences, University of Manitoba, Winnipeg, MB

Rémi Quirion

Chief Scientist Officer, Fonds de recherche du Québec, Montréal, QC

Global Health Award Advisory Committee

Alan Bernstein (Chair)

President, CIFAR, Toronto, ON

Christian Bréchet

President, Global Virus Network (GVN) Paris, France

Roger Glass

Director, Fogarty International Center, National Institutes of Health, Baltimore, MD

Glenda Gray

President, South African Medical Research Council, Johannesburg, South Africa

Kiyoshi Kurokawa

Professor, National Graduate Institute for Policy Studies, Tokyo, Japan

Nubia Munoz

Emeritus Professor, National Cancer Institute of Colombia, Lyon, France

Peter Piot

Director of the London School of Hygiene & Tropical Medicine School, and Professor of Global Health London, UK

K. Srinath Reddy

President, Public Health Foundation of India, Delhi, India

Peter Singer

Chief Executive Officer, Grand Challenges Canada Toronto, ON

Stephanie Strathdee

Associate Dean, Global Health Sciences, Harold Simon Professor, Chief, Division of Global Public Health, University of California, San Diego, Calif.

2018 FINANCIAL HIGHLIGHTS

The Gairdner Foundation maintains proper financial controls and sound management practices to ensure the best use of its public and private funds. Our external auditors issued an unqualified audit opinion about the Gairdner Foundation financial statements which appears at the end of this report.

In 2008, the Foundation received a \$20 Million fund from the Federal government for the purpose of supporting and enhancing the Gairdner International Awards Program. The income from the fund can be used to fund the Foundations' activities, but the capital must be preserved so long as the agreement continues.

In 2008, the Foundation also received \$2 million from the Alberta government for the purpose of expanding the Gairdner Outreach Program in Alberta.

These funds have been invested together with the original family endowment under the guidance of the Investment Committee, and in accordance with the terms of these agreements and prudent governance. The investment policy adopted by the Board has been designed with the principal objective being preservation of capital over the long-term.

In 2018 the Foundation also received annual income from direct grants from CIHR, the governments of Ontario and Quebec, as well as a variety of sponsors and donors.

Planning and Monitoring Investments

The Foundation has a duty to ensure responsible stewardship of funds. The Investment Committee oversees the management and investment of the Gairdner Foundation funds in compliance with our funding agreements. The Foundation's funds have been invested with 3 major objectives:

1. Preservation of capital
2. Income to meet the administrative costs and award objectives of the Foundation
3. Growth in the 'capital' value of the Portfolio's assets in real (inflation-adjusted) terms

The investment strategy and policy are reviewed annually and the portfolio is reviewed on a quarterly basis. Based on the Foundation's investment objectives, risk tolerance, income requirements and liquidity needs, the long-term target asset allocation of 35% fixed income, 50% equity and 15% alternative strategies was approved by the Board in early 2016. The IPS was reviewed and updated in 2018, however the asset allocation targets remained unchanged. This remains a very conservative portfolio. The average bond rating in the portfolio is A+, with a yield of 3.10%. The portfolio held 34% cash/fixed income, 51% equities and 15% alternatives at December 31, 2018 and is in compliance with the investment policy statement.

The investment portfolio decreased from \$34.3 million at the end of 2017 to \$31.6 million at the end of 2018, as a result of stock market declines at year-end. Investment returns have already recovered in the first quarter of 2019.

Results of Operations

Revenue for the year totaled \$2.6 million, comprised of \$1 million from non-governmental sources and gala table sales (40% compared to 31% in 2017), \$1.9 million from government (72% compared to 55% in 2017), and -\$0.3 million from investment income (-12% compared to 14% in 2017).

Revenue decreased by \$0.9 million over 2017 as a result of a decrease in investment income of \$0.8m and a decrease in sponsorship income, table sales and government grants of \$0.1 million.

Expenditures were \$2.9 million for the year, an increase of \$0.1 million from 2017, due to an increased number of events, communications and marketing as well as compensation, set off by a decrease in travel costs of advisory board.

Compliance

The Foundation is compliant with all the terms of the agreement with CIHR, dated March 28, 2008.

GAIRDNER FOUNDATION STAFF AS OF DECEMBER 2018

Dr. Janet Rossant, President & Scientific Director

Sommer Wedlock, Vice President & Director, Communications

Penny Balberman, Director of Finance

Catherine Rogers, Financial Accountant

Sarah Devonshire, Project Manager & Executive Coordinator

Paige O'Beirne, Manager, Fund Development & Communications

Kelty Reid, Advisor, Communications and Fund Development

Julia Ferrari-Hernandez, Administrative Program Assistant

Gairdner employs five full-time employees and three part-time employees.

COMPENSATION

Directors

Directors are not compensated for regular Board and Committee duties. They may, however, be compensated for any reasonable out-of-pocket expenses incurred while performing their duties or attending Foundation meetings.

Senior Officers

For the fiscal year ending December 31, 2018, compensation for senior officers was:

Dr. Janet Rossant, President and Scientific Director	\$200,000
Sommer Wedlock, Vice President & Director of Communications	\$ 161,385

The Gairdner Foundation

Financial statements

December 31, 2018

Independent auditors' report

To the Members of
The Gairdner Foundation

Opinion

We have audited the financial statements of **The Gairdner Foundation** [the "Foundation"], which comprise the statement of financial position as at December 31, 2018 and the statement of operations, statement of changes in net assets and statement of cash flows for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Foundation as at December 31, 2018 and the results of its operations and its cash flows for the year then ended in accordance with Canadian accounting standards for not-for-profit organizations.

Basis for opinion

We conducted our audit in accordance with Canadian generally accepted auditing standards. Our responsibilities under those standards are further described in the *Auditor's responsibilities for the audit of the financial statements* section of our report. We are independent of the Foundation in accordance with the ethical requirements that are relevant to our audit of the financial statements in Canada, and we have fulfilled our ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Other information included in the Foundation's 2018 Annual Report

Management is responsible for the other information. The other information comprises the information included in the Annual Report, but does not include the financial statements and our auditor's report thereon.

Our opinion on the financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information, and in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated.

We obtained the Annual Report prior to the date of this auditor's report. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with Canadian generally accepted accounting standards for not-for-profit organizations, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Foundation's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Foundation or to cease operations, or has no realistic alternative but to do so.



Those charged with governance are responsible for overseeing the Foundation's financial reporting process.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Canadian generally accepted auditing standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with Canadian generally accepted auditing standards, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Foundation's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Foundation's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Foundation to cease to continue as a going concern.
- Evaluate the overall presentation, structure, and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Toronto, Canada
May 15, 2019

Ernst & Young LLP

Chartered Professional Accountants
Licensed Public Accountants



The Gairdner Foundation

Statement of financial position

As at December 31

	2018 \$	2017 \$
Assets		
Current		
Cash	255,365	180,370
Accounts receivable	171,360	127,469
Prepaid expenses	75,314	47,965
Total current assets	502,039	355,804
Investments, fair value <i>[note 3]</i>	31,561,235	34,306,276
Capital assets, net <i>[note 4]</i>	9,737	12,441
	32,073,011	34,674,521
Liabilities and net assets		
Current		
Accounts payable and accrued liabilities	594,355	707,598
Total current liabilities	594,355	707,598
Federal government funding <i>[note 5]</i>	22,158,160	24,088,957
Alberta government funding <i>[note 6]</i>	2,173,290	2,438,730
Total liabilities	24,925,805	27,235,285
Commitments <i>[note 8]</i>		
Net assets		
Unrestricted	500,000	500,000
Internally restricted <i>[note 7]</i>	6,647,206	6,939,236
Total net assets	7,174,206	7,439,236
	32,073,011	34,674,521

See accompanying notes

On behalf of the Board:

Director

Director

The Gairdner Foundation

Statement of operations

Year ended December 31

	2018 \$	2017 \$
Revenue		
Investment income (loss) <i>[note 3]</i>		
Interest and dividends	114,475	86,372
Realized gain on investments	377,799	327,767
Net change in unrealized gain (loss) on investments	(807,653)	74,990
	(315,379)	489,129
Federal government grant funding <i>[note 5]</i>	909,568	931,373
Alberta government grant funding <i>[note 6]</i>	162,053	127,503
Other government grants	826,552	879,975
Table sales	490,000	602,779
Other contributions and sponsorships	548,964	471,023
	2,621,758	3,501,782
Expenses		
Awards	700,000	700,000
National events	853,997	741,838
Advisory boards	220,832	271,653
Marketing and communications	178,363	162,634
Administrative	960,596	949,480
	2,913,788	2,825,605
Excess (deficiency) of revenue over expenses for the year	(292,030)	676,177

See accompanying notes

The Gairdner Foundation

Statement of changes in net assets

Year ended December 31

	2018		
	Unrestricted	Internally restricted	Total
	\$	\$	\$
	<i>[note 7]</i>		
Balance, beginning of year	500,000	6,939,236	7,439,236
Deficiency of revenue over expenses for the year	(292,030)	—	(292,030)
Interfund transfer <i>[note 7]</i>	292,030	(292,030)	—
Balance, end of year	500,000	6,647,206	7,147,206

	2017		
	Unrestricted	Internally restricted	Total
	\$	\$	\$
	<i>[note 7]</i>		
Balance, beginning of year	500,000	6,263,059	6,763,059
Excess of revenue over expenses for the year	676,177	—	676,177
Interfund transfer <i>[note 7]</i>	(676,177)	676,177	—
Balance, end of year	500,000	6,939,236	7,439,236

See accompanying notes

The Gairdner Foundation

Statement of cash flows

Year ended December 31

	2018 \$	2017 \$
Operating activities		
Excess (deficiency) of revenue over expenses for the year	(292,030)	676,177
Add (deduct) items not affecting cash		
Amortization of capital assets	9,907	8,618
Investment loss (income)	315,379	(489,129)
Government funding recognized as revenue	(1,071,621)	(1,058,876)
	(1,038,365)	(863,210)
Changes in non-cash working capital balances related to operations		
Accounts receivable	(43,891)	(2,654)
Prepaid expenses	(27,349)	34,500
Accounts payable and accrued liabilities	(113,242)	(93,509)
Cash used in operating activities	(1,222,847)	(924,873)
Investing activities		
Purchase of capital assets	(7,203)	(6,359)
Withdrawals from investments held by third parties	1,305,045	750,733
Cash provided by investing activities	1,297,842	744,374
Net increase (decrease) in cash during the year	74,995	(180,499)
Cash, beginning of year	180,370	360,869
Cash, end of year	255,365	180,370

See accompanying notes

The Gairdner Foundation

Notes to financial statements

December 31, 2018

1. Purpose of the organization

The Gairdner Foundation [the "Foundation"] provides awards to medical scientists in recognition of outstanding discoveries and contributions to medical science, and as an incentive to those who follow in their footsteps. In addition to encouraging and rewarding individuals, the Foundation presents the Gairdner Awards in order to focus public, professional and scientific attention on significant achievements in the field of health sciences.

The Foundation was incorporated under the laws of Ontario until October 2, 2013 and is currently incorporated under the *Canada Not-for-profit Corporations Act*. The Foundation is registered as a charitable organization under the *Income Tax Act* (Canada) and, as such, is exempt from income taxes and is able to issue donation receipts for income tax purposes.

2. Summary of significant accounting policies

These financial statements are prepared in accordance with Part III of the *CPA Canada Handbook – Accounting*, which sets out generally accepted accounting principles for not-for-profit organizations in Canada and includes the significant accounting policies set out below.

Cash and cash equivalents

Cash and cash equivalents consist of cash on deposit and short-term investments with maturities of less than 90 days at the date of purchase. Cash and cash equivalents exclude amounts that are managed for returns rather than being held for liquidity.

Financial instruments

Investments reported at fair value consist of equity instruments that are quoted in an active market as well as investments in pooled funds and any investments in fixed income securities that the Foundation designates upon purchase to be measured at fair value. Transaction costs are recognized in the statement of operations in the period during which they are incurred.

Investments in fixed income securities not designated to be measured at fair value are initially recorded at fair value net of transaction costs and are subsequently measured at amortized cost using the straight-line method, less any provision for impairment.

All transactions are recorded on a trade date basis.

Other financial instruments, including accounts receivable, and accounts payable and accrued liabilities, are initially recorded at their fair value and are subsequently measured at cost, net of any provisions for impairment.

Capital assets

Capital assets are recorded at acquisition cost less accumulated amortization. Contributed capital assets are recorded at fair value at the date of contribution. Amortization is recorded in the accounts at rates intended to write off the cost of the assets over their estimated useful lives.

The Gairdner Foundation

Notes to financial statements

December 31, 2018

Rates and methods of amortization are as follows:

Asset	Years	Method
Office equipment	5	straight-line
Computer equipment	3	straight-line
Leasehold improvements	Term of lease	straight-line

Revenue recognition

The Foundation follows the deferral method of accounting for contributions, which include grants and donations. Grants and bequests are recognized when received or receivable if the amount to be received can be reasonably estimated and collection is reasonably assured. Other donations are recorded when received, since pledges are not legally enforceable claims. Unrestricted contributions are recognized as revenue when initially recorded in the accounts. Externally restricted contributions are deferred when initially recorded in the accounts and recognized as revenue in the year in which the related expenses are recognized. Sponsorships and related event revenue are recognized when the event takes place.

Investment income (loss), which consists of interest, dividends, income distributions from pooled funds, and realized and unrealized gains and losses, net of safekeeping and investment management expenses, is recorded as revenue in the statement of operations, except to the extent that it relates to restricted contributions, in which case it is added directly to those balances.

Foreign currency translation

Transactions denominated in foreign currencies are translated into Canadian dollars at exchange rates prevailing at the transaction date. Monetary assets and liabilities are translated into Canadian dollars at exchange rates in effect as at the statement of financial position date. Non-monetary assets and liabilities are translated at the historical rate. Exchange gains and losses are included in the statement of operations except to the extent that they relate to investments, in which case they are accounted for consistent with investment income (loss).

Contributed materials and services

Because of the difficulty in determining fair value, contributed materials and services are not recognized in the financial statements.

The Gairdner Foundation

Notes to financial statements

December 31, 2018

3. Investments

Investments consist of the following:

	2018		2017	
	\$	%	\$	%
Cash and cash equivalents	621,236	2.0	1,445,276	4.2
Bonds				
Canadian	7,767,000	24.6	8,802,000	25.7
International	2,364,000	7.5	1,896,000	5.5
Equities				
Canadian	4,840,000	15.3	6,031,000	17.6
US	6,027,000	19.1	6,223,000	18.1
Other international	5,167,000	16.4	5,006,000	14.6
Hedge funds	4,775,000	15.1	4,903,000	14.3
	31,561,236	100.0	34,306,276	100.0

Investments in pooled funds have been included above based on their underlying asset mix.

As at December 31, 2018, bonds have an average term to maturity of 4.7 years [2017 – 5.1 years] and a weighted average yield of 3.10% [2017 – 3.37%].

Investment income (loss) recorded in the statement of operations is calculated as follows:

	2018 \$	2017 \$
Interest and dividends	705,133	594,714
Realized gain on investments	1,724,999	1,574,559
Net increase (decrease) in unrealized gain on investments	(3,687,676)	360,243
Total investment income (loss)	(1,257,544)	2,529,516
Less safekeeping and investment management expenses	(182,452)	(179,793)
Investment income (loss), net of safekeeping and investment management expenses	(1,439,996)	2,349,723
Add (deduct) investment income related to		
Federal government funding [note 5]	1,021,229	(1,687,513)
Alberta government funding [note 6]	103,388	(173,081)
Investment income (loss) recognized in revenue	(315,379)	489,129

The Gairdner Foundation

Notes to financial statements

December 31, 2018

4. Capital assets

Capital assets consist of the following:

	2018		
	Cost	Accumulated amortization	Net book value
	\$	\$	\$
Computer equipment	24,114	16,477	7,637
Office equipment	25,568	24,130	1,438
Leasehold improvements	6,870	6,208	662
	56,552	46,815	9,737

	2017		
	Cost	Accumulated amortization	Net book value
	\$	\$	\$
Computer equipment	20,205	14,901	5,304
Office equipment	25,100	20,000	5,100
Leasehold improvements	6,871	4,834	2,037
	52,176	39,735	12,441

5. Federal government funding

The Foundation received a \$20,000,000 grant from the federal government in 2008 for the purpose of supporting and enhancing the Gairdner International Awards Program. This grant is to be invested for the duration of the funding agreement and only the income, which includes interest, dividends and realized gains/losses, may be used to support the Foundation's activities until the funding agreement terminates. The Foundation can draw upon the capital to a maximum of \$2,000,000 over the term of the funding agreement, provided it uses best efforts to restore any capital withdrawn.

The funding agreement terminates on March 31, 2028, unless terminated earlier, or renewed in accordance with the funding agreement. Upon termination, the Foundation may use the unspent balance of the original grant as it deems appropriate.

The Gairdner Foundation

Notes to financial statements

December 31, 2018

The changes in the Government of Canada funding balance are as follows:

	2018 \$	2017 \$
Balance, beginning of year	24,088,957	23,332,817
Interest and dividends	370,679	297,986
Realized gain on investments	1,223,350	1,130,809
Net increase (decrease) in unrealized gain on investments	(2,615,258)	258,718
Investment income (loss) for the year <i>[note 3]</i>	(1,021,229)	1,687,513
Amount recognized as revenue	(909,568)	(931,373)
Balance, end of year	22,158,160	24,088,957

As at December 31, 2018, the amount available for spending in future years is \$2,815,465 [2017 – \$2,131,004].

6. Alberta government funding

The Foundation received \$2,000,000 from the Alberta government in 2008 for the purpose of expanding the Alberta Gairdner Outreach Program. The funds received from the Alberta government are to be invested during the term of the funding agreement, and only the income, which includes interest, dividends and realized gains/losses, may be used to support the Alberta Gairdner Outreach Program. The Foundation can draw upon the capital to a maximum of \$250,000 over the term of the funding agreement, provided it uses best efforts to restore any capital withdrawn.

The grant has an indeterminate term; however, the funding agreement is to be reviewed at least every five years. The Alberta government has the right to terminate the agreement, without cause, upon giving 90 days' notice. Upon termination, the remaining balance of the fund not previously committed for outreach activities must be repaid.

The changes in the Alberta Government funding balance are as follows:

	2018 \$	2017 \$
Balance, beginning of year	2,438,730	2,393,152
Interest and dividends	37,527	30,563
Realized gain on investments	123,850	115,982
Net increase (decrease) in unrealized gain on investments	(264,765)	26,536
Investment income (loss) for the year <i>[note 3]</i>	(103,388)	173,081
Amount recognized as revenue	(162,052)	(127,503)
Balance, end of year	2,173,290	2,438,730

As at December 31, 2018, the amount available for spending in future years is \$234,334 [2017 – \$235,011].

The Gairdner Foundation

Notes to financial statements

December 31, 2018

7. Internally restricted net assets

Internally restricted net assets are funds set aside by the Board of Directors to invest in order to earn income to help fund future operating expenses. In 2018, the Board of Directors approved an interfund transfer from internally restricted to unrestricted net assets of \$292,030. In 2017, the Board of Directors approved an interfund transfer from unrestricted to internally restricted net assets of \$676,177. The Board of Directors may approve a transfer from internally restricted net assets, if required, to fund unanticipated deficits from fundraising shortfalls or unanticipated expenditures.

8. Commitments

The Foundation is required to make future minimum annual lease payments for its premises as follows:

	\$
2019	78,000
2020	81,000
2021	81,000
2022	81,000
2023	81,000
2024	40,500
	<u>442,500</u>

9. Financial instruments

The Foundation is exposed to various financial risks through transactions in financial instruments.

Currency risk

The Foundation is exposed to currency risk with respect to its investments denominated in foreign currencies, because the fair value and future cash flows will fluctuate due to the changes in the relative value of foreign currencies against the Canadian dollar.

Interest rate risk

The Foundation is exposed to interest rate risk with respect to its investments in fixed income investments and pooled funds that hold fixed income securities because the fair value will fluctuate due to changes in market interest rates.

Other price risk

The Foundation is exposed to other price risk through changes in market prices [other than changes arising from interest rate or currency risks] in connection with its investments in equity securities and pooled funds.