



FINAL REPORT

EVALUATION OF THE CANADA GAIRDNER AWARDS

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EXECUTIVE SUMMARY

A. Background

The Gairdner Foundation was established in 1957 to “recognize and reward the achievements of medical researchers whose work ‘contributes significantly to improving the quality of human life’”, focusing on the “recognition of scientists it deemed to have made the most important breakthrough discoveries in biomedical science”.¹ Since then the Gairdner Awards have become one of the world’s pre-eminent awards for outstanding biomedical research, built on a foundation of rigorous adjudication by panels of leading national and international scientists.

In 2008, the federal government, through the Canadian Institutes of Health Research (CIHR), provided an endowment grant of \$20 million to strengthen the Gairdner Awards program, including increasing the value of each Award to \$100,000 from \$30,000, and enabling seven Awards to be granted per year. Canada’s financial support was recognized by rebranding the Awards as the Canada Gairdner Awards with the underlying intent to position the Awards as a Canadian initiative to recognize and reward outstanding scientific achievements in health research anywhere in the world. The Foundation also received a \$2 million Government of Canada grant in 2013-14 to be disbursed over six years that provides funding to strengthen the adjudication process and international outreach activities. Canada Gairdner Awards are conferred annually in three separate categories:

- **Canada Gairdner International Award:** recognizes outstanding biomedical scientists who have made original contributions to medicine with the goal of contributing to increased understanding of human biology and disease through research. (Five awards.)
- **John Dirks Canada Gairdner Global Health Award:** created in 2008, this award recognizes scientists whose advances have (or will potentially have) a significant impact on health outcomes in the developing world. (One award.)
- **Canada Gairdner Wightman Award:** recognizes exceptional leadership in biomedical sciences in Canada at an internationally recognized level, and institutional academic and scientific leadership in establishing and developing biomedical research. Prior to 2009 the Wightman Award was granted on an occasional basis. (One award.)

A particularly distinctive feature of the Canada Gairdner Awards is the outreach activity undertaken as a core element of the annual Awards celebrations. Award laureates spend a block of time travelling to university campuses across Canada to interact with members of their faculties of science and medicine, and university and high school students. This outreach showcases the achievements of the laureates to national audiences, provides opportunities for researchers and students to engage with the laureates, illustrates to high school students how laureates embarked on their research careers, and helps to raise the wider public profile of science across Canada. These visits and presentations are complemented by lectures and symposia featuring the laureates during the Awards week in Toronto each October.

¹ The Gairdner Foundation, *Corporate Plan: 2017*, Toronto, 2016, p3. (gairdner.org/wp-content/uploads/2017/03/annual_summary_corporate_plan2017.pdf)

B. Evaluation Objectives and Scope

The Foundation's funding agreement with the CIHR requires an independent evaluation of the Foundation's performance in achieving its Outcomes and Principles to be conducted at least once every 5 years. The 2017 evaluation was designed to address five evaluation questions relating to the relevance (continuing need), effectiveness (achievement of intended outcomes, actions taken in response to the recommendations of the 2013 evaluation, and degree of support for an additional Gairdner Award), and the efficiency of program delivery and resource utilization. It was also designed to respond to the requirements of the 2016 Treasury Board *Policy on Results*. Three lines of enquiry were utilized: key informant interviews with representatives of a cross-section of stakeholder organizations; a review of documentation and data on the Foundation's management, operations and results; and, a review of published articles on the value of awards for outstanding scientific research.

C. Relevance

The Gairdner International Awards have a longstanding reputation and visibility in the global biomedical research community for the early recognition of knowledge breakthroughs with significant potential impacts on health, and are one of a small number of "Nobel predictor" prizes. This reputation is founded on the vision of James Gairdner in 1958 to recognize science that makes breakthrough discoveries possible and would be very difficult to achieve if the Gairdner Awards were one of the many new awards and prizes for research excellence introduced in recent years.

The value of the Awards is a function of a rigorous adjudication process; a unique and highly regarded outreach program that takes laureates to universities across Canada; and, international outreach to recognize laureates in their home countries and encourage nominations. From a public policy perspective, the Awards contribute to positioning Canada's support for world-class biomedical research and openness to international research collaborations, and encouraging students and trainees to consider careers in biomedical science. As such, the Gairdner Awards program is aligned to the central tenets of the government's innovation agenda and warrants ongoing public support.

D. Effectiveness

1. Achievement of expected outcomes

The Gairdner Awards were consistently viewed by key stakeholders as being a "Canadian success story". The extent to which expected outcomes across five performance dimensions are being achieved, and contributing to this success, is summarized below.

a) Recognizing and rewarding international excellence in fundamental research that impacts human health

The Foundation is consistently achieving this outcome as demonstrated by the esteem in which Award laureates are held in the biomedical research community, both nationally and internationally, and the recognition of the Awards as a "Nobel predictor". This position is

underpinned by the rigorous adjudication process and focus on recognizing breakthrough results in biomedical research that are expected to lead to significant health benefits.

The Gairdner International Awards are seen to particularly successful. The Global Health Award is more recent and extends the coverage of the Awards into the global health field. It is regarded as the first international award that recognizes outstanding work in this field and is still building awareness and recognition. Notably, one of the nine laureates of this Award subsequently received a Nobel Prize. Views on the effectiveness of the Gairdner Wightman Award are more mixed than for the other two Award categories. This Award is the only one exclusively for Canadian-based researchers, and to some extent, runs the risk as being seen as a “consolation prize”. Key informants who have been more closely involved with the Wightman adjudication process did not support this view, indicating that laureates are on par with International Award laureates. However, they noted that it can be difficult to find an optimal balance between the two goals of the Award, that is, to recognize leadership in a field of biomedical research and to demonstrate scientific and institutional leadership.

b) Inspire the next generation of scientists by promoting the value and impacts of scientific research through education and outreach activities targeting research faculty and students, and high school students

A large majority of the key informants rated the Foundation’s performance in achieving this outcome quite highly. Award laureates’ presentations are typically “must see” events for research faculty and trainees, especially outside of Toronto where there are fewer opportunities to engage with leading international researchers. High school outreach is a unique aspect of the Awards and is highly valued by the hosting locations and laureates. One key informant who has been closely involved with the Awards in several roles suggested the Foundation should take advantage of the drawing power of the Awards and laureates to develop stronger partnerships with participating institutions and focus outreach efforts on those that are strongly committed to helping to build the profile of the Awards and laureates’ achievements.

Some key informants rated the Foundation’s performance against this rating as “moderate”. Their reasons related to the concentration of outreach activities in a single week each year. They would like to have more events throughout the year, with participation by laureates, and greater use of electronic media to broaden the audience base for high school audiences.

c) Increase awareness among members of the public, policymakers and other stakeholders of the impact of health science on everyday lives through education and outreach activities

The Foundation has been relatively less successful in achieving this outcome. In large part, this is a function of the Foundation’s limited ability to reach members of the public and policy makers via outreach events. Resource limitations mean that activities and target audiences have to be prioritized, with the primary focus being audiences that are central to the Mission of the Awards and more readily targeted: research faculty and students in universities, and high school students. Given this constraint, the Foundation must target its wider awareness building activities carefully, for example, by using events such as the Awards gala to build relationships between policy makers and research leaders, and encouraging interested members of the public to attend outreach events through targeted communications.

d) Increase international awareness of the Awards and Canadian health research, leading to broader participation on adjudication committees and greater numbers of nominations from around the world through marketing and communications activities

The Foundation is increasing international awareness of the Awards, most notably via receptions at embassies, high commissions, consulates and home institutions of Award laureates. The ability of the Foundation to expand this activity has been made possible by additional funding from the federal government for outreach activities. This outreach provides an opportunity for Canada to engage in science diplomacy, enhances the ability of the Foundation to engage with the biomedical science communities in laureates' home countries, promote nominations, and identify prospective adjudication committee members. However, the ability to directly increase awareness in countries with strong biomedical research communities but no laureates is limited. The establishment of a partnership between the Foundation and the Consortium of Universities for Global Health, where the Global Health Award laureates are keynote presenters at the Consortium's annual conferences has provided a venue to increase awareness and celebrate the quality of these laureates.

e) Build and sustain the financial base for the Awards by expanding support from other government, not-for-profit and private sponsors and partners

The Foundation has had some success in building the financial base for the Awards but still has a long way to go to establish a strong and sustainable base for operations. A new fundraising strategy is being rolled out during 2017, and implementation of this strategy will need to be a key area of sustained focus given that competition for sponsorship funding is strong and care is needed to ensure close alignment of sponsors' expectations to the goals of the Awards. Key informants representing sponsors suggested that the Foundation needs to strengthen its marketing and fundraising capacities (which are inter-dependent), and build relationships with both prospective and current sponsors if it is to secure additional support.

2. Actions taken in response to the 2013 evaluation findings

The 2013 evaluation of the Awards identified a series of actions to strengthen delivery of the Awards relating to funding growth and stability, nomination and adjudication processes, and support for outreach, subject to the availability of resources and funding.

The Foundation has made some progress in securing additional funding from public sector sources and anticipates further growth in response to its new fundraising strategy. Nominations for the International Award have increased to the point where managing the volume of review work has become quite a challenge for the adjudication committees. Nominations for the Global Health and Wightman Awards have been stable or increased slightly and the need to further stimulate nominations for these Awards has been recognized. The quality of outreach activities, particularly to high schools, has also benefited from additional federal funding. However, outreach coordinators continue to work in relative isolation with limited opportunities to share lessons learned and best practices, and would benefit from more proactive support from the Foundation.

3. Level of support for a young investigator award

A large majority of the key informants indicated that, while there could be merit to an award for young investigators, they were ambivalent about the idea of it being a Gairdner Award. The key reasons for this ambivalence related to the risk of diluting the Gairdner brand, the additional costs involved with a new award and its administration, the challenges involved in defining a “young investigator” and assessing their achievements and promise, and competition from other, well-funded young investigator awards in Canada and internationally (including the CIHR’s own award). Some stakeholder representatives suggested that the Foundation may gain more by supporting a high school award, possibly in partnership with an existing award. They also suggested that the Board should periodically discuss options for the further evolution of the Awards and establish criteria to evaluate emerging opportunities.

E. Efficiency

The nature of the Foundation and its activities – with 5.5 FTEs and heavily reliant on a small number of processes that involve face-to-face interactions between geographically dispersed committee members and laureates – tends to limit the extent to which significant efficiencies or resource savings can be achieved. Various process improvements have been implemented in recent years to increase the effectiveness and efficiency of key processes. These include the introduction of an online nomination submission process, a triage process to screen nominations for the International Awards prior to their evaluation by the Medical Review Panel (MRP), use of sub-groups of the MRP to evaluate nominations prior to the full committee meeting, extending the length of subsequent Medical Advisory Board (MAB) meetings to facilitate more careful review and the introduction of electronic voting to support the selection of proposed laureates. The Foundation also partners with other organizations with complementary interests to co-host or support research symposia and public events outside the conduct of outreach visits and Awards week each October.

Areas with potential for improvement suggested by key informants related to providing more support to outreach coordinators to plan and organize events, continuing to build the use of social media in combination with traditional media to improve awareness of the Awards and expand audiences for events, improving the understanding of the nominations process among senior staff in Canadian biomedical research institutions and faculties of medicine, and introducing rules to limit the frequency of re-nominating candidates. Participating universities would like to have more input to the choice of speakers for their locations, to match the speakers to areas of specialization in the host universities, and for the lead time between the assignment of speakers and hosting of events to be increased, if possible, to facilitate planning, promotion and cost control.

F. Recommendations

We recommend that the Foundation take the following actions, subject to there being sufficient resources available and without compromising the core elements of Awards program.

1. Nomination and selection of Award Winners

- 1.1 Review the guidelines and selection criteria for the Wightman Award to clarify how the dual emphasis on leadership in a specific field of biomedical sciences at an internationally

recognized level, and institutional academic and scientific leadership in establishing and developing biomedical research, can be optimally balanced.

- 1.2 Investigate the need to increase awareness among science and medical faculty in Canada regarding who can nominate someone for a Gairdner Award and, if need be, undertake promotions to increase awareness and encourage nominations of deserving candidates. Guidance material on best practice approaches to preparing nomination packages should also be distributed to facilitate the preparation of nomination packages.
- 1.3 Investigate the merits of introducing a limit on the number of consecutive years someone can be nominated, and the time period before which they can be nominated again, if the volume of nominations for an Award category grows to the point where it is difficult for adjudication committees to adequately assess all nominations.
- 1.4 Further strengthen efforts to build international awareness of the Gairdner Awards, particularly the Global Health Award, in countries with strong biomedical research communities that have not nominated outstanding researchers to date.

2. Outreach planning and coordination

- 2.1 Review the current process for determining the matching of laureates and other speakers to institutions participating in the national outreach program to ensure that the process is transparent and equitable, recognizing that it is not always possible to accommodate the desired preferences of all participating institutions.
- 2.2 As part of the review in recommendation 2.1, determine if the lead time between assigning the visiting speakers and conducting outreach events can be increased, with a view to providing more time for the hosting institutions to organize their venues, plan promotional activities and seek local sponsorship support.
- 2.3 Strengthen the support for outreach coordinators to enable best practices and lessons learned to be shared, ideally, via periodic regional or national meetings, and to provide guidance or assistance in such areas as promoting outreach events and broadening access for, and engagement with, high school students through the use of technology.

3. Further evolution of the Awards

- 3.1 Periodically review the potential value of increasing the range and/or value of the Awards at the Board level, including establishing criteria to assess the merits of potential opportunities for new Award categories, on a standalone basis or in partnership with other organizations that recognize and reward outstanding research, while remaining faithful to the Foundation's Mission.

4. Funding growth and sustainability

- 4.1 Continue current efforts to secure additional multi-year funding support from current and prospective new sponsors to put the Foundation on a more secure financial footing.

* * *

I. INTRODUCTION

A. Background

The Gairdner Foundation was established in 1957 to “recognize and reward the achievements of medical researchers whose work ‘contributes significantly to improving the quality of human life’”, focusing on the “recognition of scientists it deemed to have made the most important breakthrough discoveries in biomedical science”.² The first annual Gairdner Awards were granted in 1959, and funded from personal gifts of the founder, James A. Gairdner, and members of his family. Since then the Gairdner Awards have become one of the world’s pre-eminent awards for outstanding biomedical research, built on a foundation of rigorous review and selection of laureates by panels of leading national and international scientists.

In 2008, the federal government, through the Canadian Institutes of Health Research (CIHR), provided an endowment grant of \$20 million to strengthen the Gairdner Awards program. Starting in 2009, the value of each Award was increased to \$100,000 from \$30,000 and the number of individual awards increased to seven per year. Canada’s financial support was recognized by rebranding the Awards as the Canada Gairdner Awards with the underlying intent to position the Awards as a Canadian initiative to recognize and reward outstanding scientific achievements in health research anywhere in the world.

Canada Gairdner Awards are conferred in three separate categories:

- **Canada Gairdner International Award:** recognizes outstanding biomedical scientists who have made original contributions to medicine with the goal of contributing to increased understanding of human biology and disease through research. Five awards are made each year.
- **John Dirks Canada Gairdner Global Health Award:** created in 2008, this award recognizes scientists whose advances have (or will potentially have) a significant impact on health outcomes in the developing world. Previously known as the Canada Gairdner Global Health Award, the name was changed in 2016 to recognize the contributions of the Foundation’s long-standing President and Scientific Director, Dr. John Dirks, who retired in 2016.
- **Canada Gairdner Wightman Award:** recognizes exceptional leadership in Canada and internationally in both a specific field of biomedical sciences (basic, clinical, population health), and institutional and scientific leadership in establishing and developing biomedical research. Prior to 2009, the Wightman Award was granted on an occasional basis rather than annually.

A particularly distinctive feature of the Canada Gairdner Awards is the outreach activity undertaken as a core element of the awards celebration. Award laureates spend a block of time travelling to university campuses across Canada where they participate in:

² The Gairdner Foundation, *Corporate Plan: 2017*, Toronto, 2016, p3. (gairdner.org/wp-content/uploads/2017/03/annual_summary_corporate_plan2017.pdf)

- Lectures and presentations to, and meetings with, faculty members, researchers, and students.
- Presentations to high school students where the students hear about the laureates' discoveries and how they came to have a career in biomedical science. The aim of these presentations is to encourage students to consider careers in health sciences and research.

These visits are followed by a formal awards dinner, lectures by the laureates and research symposia on health sciences topics in Toronto. Many laureates have indicated to the Foundation (and in the interviews conducted for this evaluation) that the outreach activity is the highlight of their award experience.

B. Evaluation Objectives and Scope

The Foundation's funding agreement requires it to conduct an independent evaluation of the Foundation's performance in achieving the Outcomes and Principles in that agreement at least once every 5 years. These Outcomes and Principles are as follows:

- **Outcomes** – *The Foundation shall use the Fund with a view to maximizing the following desired outcomes:*
 - (a) *for Canadian students and researchers and others world-wide to consider the Canada Gairdner International Awards to be highly prestigious and valued health research prizes with an appropriate financial value;*
 - (b) *for the new individual Canada Gairdner Global Health Award to be considered by experts world-wide as the first prestigious award of its kind for research into international global health issues;*
 - (c) *for the Canada Gairdner International Award winners to become exposed to, and involved in, Canada's science communities; and*
 - (d) *for the Foundation to be sound financially and able to attract funding from other parties to sustain and grow the Canada Gairdner International Awards.*
- **Principles** – *The Foundation shall respect the following principles in undertaking and supporting the Canada Gairdner International Awards:*
 - (a) *inspire Canadians to perform at world-class levels of scientific excellence;*
 - (b) *encourage and celebrate international excellence in health research;*
 - (c) *cultivate international relationships; and*
 - (d) *foster collaborative relationships with federal, provincial, municipal and non-governmental parties to further expand and augment the Canada Gairdner International Awards.*

The objectives and scope of the 2017 evaluation drew upon the above Outcomes and Principles, and the requirements of the July 2016 Treasury Board *Policy on Results* to formulate a series of questions that provided the focus for data collection, analysis and reporting of findings. The Policy requires evaluations of government programs to examine the relevance, effectiveness

and efficiency of those programs. Five evaluation questions were developed in consultation with the Foundation's management:

■ **Relevance:**

1. Is there a continuing demonstrated need for the Canada Gairdner Awards? Do the benefits to Canada warrant continued support from the federal government?

■ **Effectiveness:**

2. To what extent have the Gairdner Foundation and Canada Gairdner Awards achieved the following outcomes?
 - (a) Recognize and reward international excellence in fundamental research that impacts human health, differentiating between:
 - Original contributions to medicine resulting in increased understanding of human biology and disease. (International Awards)
 - Advances in health research that have had (or will potentially have) a significant impact on health outcomes in the developing world. (John Dirks Canada Gairdner Global Health Award)
 - Contributions by Canadian scientists who have demonstrated outstanding leadership in medicine and medical science. (Wightman Award)
 - (b) Inspire the next generation of scientists by promoting the value and impacts of scientific research through education and outreach activities targeting research faculty and students, and high school students.
 - (c) Increase awareness among members of the public, policymakers and other stakeholders of the impact of health science on everyday lives through education and outreach activities.
 - (d) Increase international awareness of the Awards and Canadian health research, leading to broader participation on adjudication committees and greater numbers of nominations from around the world through marketing and communications activities.
 - (e) Build and sustain the financial base for the Awards by expanding support from other government, not-for-profit and private sponsors and partners.
3. What actions were taken in response to the opportunities to strengthen the delivery of the Awards program identified in the 2013 evaluation? To what extent did these actions lead to improvements in the performance of the Foundation and/or Awards program?
4. Is there strong support among stakeholders for an additional award, or awards, that specifically recognize and reward work by young investigators in Canada and internationally that focuses on the developing world?

■ **Efficiency:**

5. Are there opportunities to increase the efficiency of the key processes and activities involved in the Foundation's operations and the delivery of the Awards program, including but not limited to:

- (a) Award nominations and selection of Award winners
- (b) National outreach to and engagement with health research communities and high school students
- (c) Enhancing the international profile of the Awards
- (d) External communications and the use of social media
- (e) Building and sustaining the financial base of the Foundation
- (f) Governance?

C. Methodology

The conduct of the evaluation involved:

1. A review of the Foundation's documentation on the management, delivery and results of the Gairdner Awards.
2. Key informant interviews that investigated views on the relevance, effectiveness and efficiency of the Awards program. Interviews were conducted with 36 representatives of the stakeholders in the Awards, spanning laureates (3 plus another 6 who are members of the various adjudication panels); members of the adjudication panels for the International (8), Global Health (2), and Wightman (4) Awards; universities that host outreach events (4), sponsors of Award events and activities (5), Foundation managers (3), Board members (2), and outreach program coordinators (5).
3. A review of published literature relating to the significance and value of awards for outstanding scientific research.

Results from these three lines of enquiry were reviewed against the applicable evaluation questions and key findings synthesized to produce the evaluation report. In doing so, the synthesis process was used to identify areas of commonality, areas of divergence, possible reasons for such variations, and areas where the evidence was insufficient to draw firm conclusions.

D. Limitations of the Approach

A non-random purposive sampling approach was used for the key informant interviews. As such, the views provided may not reflect the full range of views regarding the Awards program or carry a risk of bias due to the nature of the involvement of the interviewees with the Awards. The analysis of the effectiveness of the Awards program relied heavily on the individual perceptions and experiences of the key informants. These risks of potential biases and reliance on small numbers of key informants were managed by comparing findings from the interviews with information in the Foundation's documents and published literature, to the extent possible. Having said this, a high degree of consistency was observed in the information provided by the key informants. A further limitation in the analysis of the effectiveness of the Awards program is the absence of a more rigorous or quantitative means of measuring the impact of awards for scientific excellence, which was beyond the time and budget provided for the evaluation.

II. PROFILE OF THE CANADA GAIRDNER AWARDS

A. Mission of the Gairdner Foundation

The core mandate of the Gairdner Foundation is to select and recognize the winners of the annual Canada Gairdner Awards. In delivering on this mandate, the Foundation's activities are guided by the Mission and Objectives established by the Board of Directors:

- **Mission:**
 - To recognize and reward international excellence in fundamental research that impacts human health.
 - To inspire the next generation of students in the excitement and potential of scientific research in a global context.
 - To engage in outreach and act as conveners with the public, policymakers and other stakeholders on the impact of science on our everyday lives and the future of the world.
- **Objectives:**
 1. Maintain the highest standards in selecting recipients of the Awards by appointing eminent international and Canadian scientists to the highly respected adjudication system.
 2. Inspire Canadian scientists through public celebrations showing the value of research.
 3. Foster collaboration between Canadian and international scientists by bringing them from abroad to meet with Canadian scientists through lectures, small group discussions, grand rounds, and social interactions.
 4. Enhance and encourage a culture of science in Canada by emphasizing excellence and the value of research to senior scientists, postgraduate, graduate and medical students, high school students and the public at large.³

B. Key Features of the Canada Gairdner Awards

1. Processes for selecting Award laureates

The principles for selecting winners of the Canada Gairdner International Award have remained essentially unchanged since the first awards were made in 1959 while the process has become more rigorous, proactive and international. The key steps involved are:

- Nominations are solicited for biomedical scientists whose “seminal discoveries and major scientific contributions constitute an original and significant achievement in biomedical science”. Nominees are encouraged from any branch of biomedicine. Nominators are asked to provide, as a minimum, information on the impact and significance of their nominee's work and its position relative to others in the applicable field, top five publications, a curriculum vitae, and two letters of recommendation. Nominators may

³ *ibid*, p5.

also suggest prospective co-nominees who have also made significant contributions in the same area.

- Nominations are reviewed and winners selected using a two-step process. In the first step, a Medical Review Panel (MRP) comprised of 34 leading Canadian health scientists, reviews and selects a short and long-list of candidates.
- A Medical Advisory Board (MAB) composed of 24 eminent international and Canadian scientists (including 8 Gairdner laureates) reviews each of the nominees on the list submitted by the MRP and selects a slate of winners by secret ballot for recommendation to the Gairdner Board of Directors.

The nomination requirements for the Canada Global Health Award and Canada Gairdner Wightman Award are similar to those for the Canada Gairdner International Award. Separate committees recommend a single winner of each of these Awards to the Board. The Global Health Award committee is composed of 12 “international experts in the field of global health with a clear understanding of the basic, clinical, population and social science issues in developing countries”. The Gairdner Wightman committee is composed of 9 “highly experienced adjudicators from Canada and the international medical scientific community who are scientists/researchers in a significant leadership role and who are familiar with Canadian medical leadership”.⁴

2. National and international outreach

As previously noted, laureates spend a block of time travelling to university campuses across Canada as part of the celebration of each year’s winners to interact with university faculty, researchers, and university and high school students. These outreach activities showcase the achievements of the laureates to national audiences, provide opportunities for researchers and students to engage with the laureates, illustrate to high school students how laureates embarked on their research careers, and help to raise the wider public profile of science across Canada. These visits and presentations are complemented by lectures and symposia featuring the laureates during the Awards week in Toronto each October.

The Foundation also co-sponsors research symposia in various Canadian cities in partnership with such organizations as universities, research institutes, provincial government ministries (e.g., Alberta Innovates), and research funding organizations (e.g., Genome Canada). Speakers at these events include leading Canadian and international scientists in the subject fields and often include past Gairdner Award laureates.

Beginning in 2010, the Foundation started holding receptions in the Canadian embassies, high commissions and consulates in the home countries of laureates or at their home institutions. These events provide opportunities to recognize the winners in their home countries while publicizing the Awards and Canadian biomedical research initiatives internationally.

3. Comparative value of the Gairdner Awards

Compared to other notable awards for outstanding biomedical research, the value of a Gairdner Award is relatively low, even following the increase from \$30,000 to \$100,000 in 2009. As can

⁴ *ibid*, p4.

be seen from the data in Exhibit 2.1, the values of these comparable awards ranges from US \$250,000 to US \$3 million for a Breakthrough Prize. With the exception of the Nobel Prize, the longer established awards have lower prize amounts than the most recently introduced. Views on the importance of award amounts vary, with some researchers (and prize sponsors), arguing that the visibility of high-value awards serve to attract bright minds and funding to scientific research while others see these awards as providing money to already well-funded researchers.⁵ Others note that, while the monetary value of an award may be welcomed, it is secondary to recognizing significant new research findings and highlighting the importance of particular research fields, and the ability of an award to consistently do this plays an important role in establishing its prestige.⁶

Exhibit 2.1 Value of Gairdner Award Compared to Other Notable Bioscience Research Awards

Prize	Year First Awarded	Current Award Value	Notes
Gairdner International Award	1959	CDN \$100,000 per laureate	Increased from CDN \$30,000 to CDN \$100,000 in 2009 5 winners per year (4 in 2013, 6 in 2014) from 2009 onwards.
Nobel Prize	1901	2017: 9.0 million Swedish Kroner (SEK) per prize	2017: ~US \$1,095,000 2012-2016: 8.0 million SEK (~US \$1.0 million) Comparable categories: Physiology or Medicine; Chemistry Prize may be awarded to up to 3 winners
Lasker Award	1946	US \$250,000 per category	Comparable categories: Basic Medical Research; Clinical Research Up to 3 winners per category
Japan Prize	1985	¥50 million per prize field	2017: ~US 439,000 Comparable category: Life Science, Agriculture & Medicine (prizes are awarded in a specific sub-field each year, chosen by a "Fields Selection Committee; e.g., 2017 prize was for Life Sciences) 1-2 winners per field in recent years
Kyoto Prize	1985	¥50 million per category	2017: ~US 439,000 Three categories, each with 4 sub-categories on a 4-year rotation. Sub-categories include: Life Sciences, and Biotechnology and Medical Technology Usually 1 winner per category; more than one in "special cases"
Shaw Prize	2004	US \$1.2 million per prize field (US \$1.0 million prior to 2015)	Comparable category: Life Science and Medicine Prize Up to 3 winners in recent years
Breakthrough Prize	2012	US \$3 million per laureate	Comparable Award category: Life Sciences Up to 5 prizes in Life Sciences per year

⁵ Merali Z., "The New Nobels", *Nature*, Vol. 498, June 13, 2013, p152.

⁶ Breithaupt H., "The Prize of Discovery", *EMBO reports* (2005) 6, 810-813

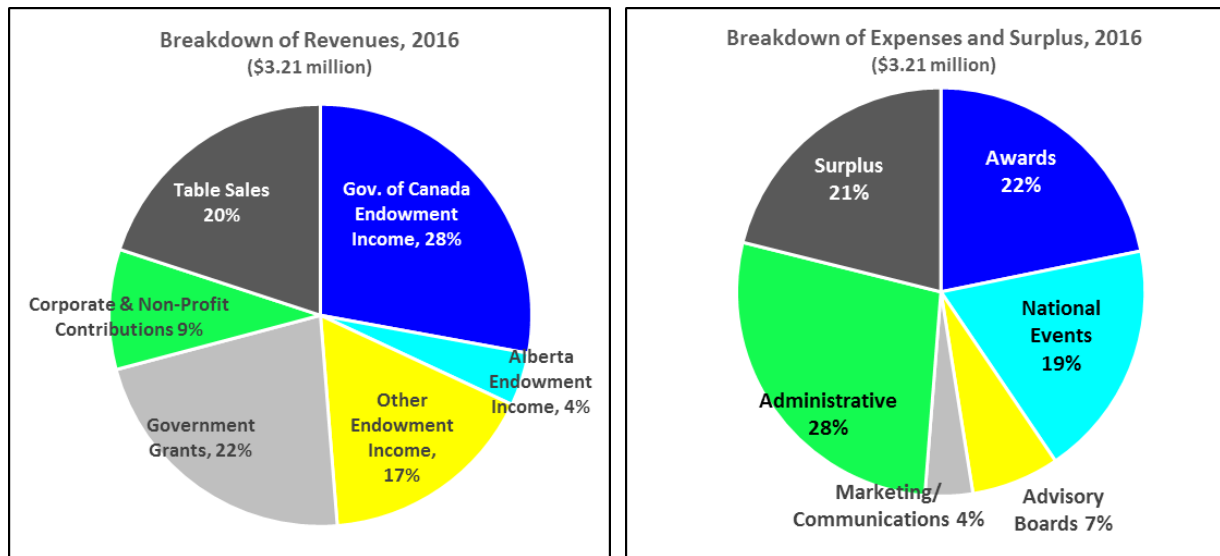
C. Gairdner Foundation Employees, Funding and Governance

The Gairdner Foundation operates with the equivalent of 5.5 full-time employees (4 full-time and 3 part-time). Funding for the Awards, outreach programs and supporting activities comes from the following sources:

- Income from the \$20 million twenty-year endowment grant provided by the Government of Canada (GOC) in 2008. The Foundation achieved an average annualized return of +5.9% between 2008 and 2016 on this federal endowment funding. A portion of the annual investment income is used to fund certain activities of the Foundation (see below) and any remaining surplus is added to the endowment. The closing balance at the end of 2016 was \$23.33 million.
- Income from a \$2 million endowment grant provided by the Alberta government in 2008, which is used to support and expand the Foundation's outreach program in Alberta.
- Income from the endowment funding provided by the Gairdner family.
- Grants from the Ontario government and provincial agencies.
- Annual disbursements from a \$2 million GOC grant over six years (2013-14 to 2018-19), to strengthen the Award adjudication process and enhance national and international outreach.
- Revenues from public and private sector sponsors, payments for tables at the annual Awards Gala, and donations.

Annual investment returns from the GOC endowment funding recognized as income are permitted to be used to fund certain costs under the terms of the funding agreement. Items that may be covered are the Award amounts; administrative costs relating to advertising and communications, fundraising, travel and accommodation costs for laureates and their families and guests, and the costs of hosting annual celebratory events; audit, evaluation and reporting costs; and, outreach activities. To date, the Foundation has only charged the Award amounts, adjudication committee expenses, event planning for the annual gala, and audit, evaluation and reporting costs to ensure there was no draw on the capital. Excluding the 2008 start-up year for the endowment, these amounts have ranged between \$782,000 and \$978,000, equivalent to an average of 4.2% of the value of the endowment each year.

The relative importance of the Foundation's various revenue sources varies from year-to-year, while the total revenues have varied between a high of \$3.37 million (2009) and a low of \$2.36 million (2011). Exhibit 2.2 provides a breakdown of the relative contributions of each revenue source in 2016. Expense items, other than the Award amounts, have also varied from year-to-year, in order to stay within the limits imposed by the annual funding available for operations. The second chart in Exhibit 2.2 shows the proportionate share of major expense items and the operating surplus in 2016. More detail on the Foundation's financial performance can be found in Appendix A, which provides a summary breakdown of audited revenues, expenses and operating surpluses for each year between 2008 and 2016.

Exhibit 2.2 Relative Shares of Major Revenue and Expense Items, 2016

Source: Gairdner Foundation, 2016 Financial Statements, p4. (gairdner.org/wp-content/uploads/2017/03/Gairdner-fdn-2016-12-31-2086824.pdf-color.pdf)

Oversight and direction for the Foundation's operations is provided by a 14-member volunteer Board of Directors. Board members come from the academic, private and public sectors. They are appointed for maximum terms of three years, renewable for up to three times.

III. RELEVANCE

In the context of program evaluation, the federal Treasury Board's *Policy on Results* defines "relevance" as, "the extent to which a program, policy or other entity addresses and is responsive to a demonstrable need. Relevance may also consider if a program, policy or other entity is a government priority or a federal responsibility."⁷ Our analysis of the relevance of the Awards considered two questions:

Is there a continuing demonstrated need for the Canada Gairdner Awards?

Do the benefits to Canada warrant continued support from the federal government?

In answering these questions, we examined the rationale for the federal government's support for the Awards, their positioning within the broader policy context for publicly funded research and development (R&D) in Canada, and the views of key informants regarding the nature of the need for the Awards.

A. Context for Federal Government Support for the Awards

The rationale for federal government support for the Canada Gairdner Awards in Budget Plan 2008, which committed the Foundation's \$20 million endowment funding, was to allow the Foundation to "enhance its awards and expand its outreach activities" and in doing so, "to brand Canada internationally as a global leader in health research".⁸ In 2013, the Foundation received an additional \$2 million to be disbursed over six years to expand support for international outreach, strengthen adjudication processes and enhance national outreach.

The need for the Awards also needs to be understood in terms of their alignment with broader policy objectives for publicly funded R&D in Canada, particularly with regard to the life sciences. From this perspective, "health/biosciences" is one of six key areas identified in Budget 2017 that are expected to provide the focus for expanding growth and creating jobs.⁹ In pursuit of this goal, the Budget noted the importance of increasing the number of people with science, technology, engineering and mathematics (STEM) skills and the need to "(r)einforce world class research strengths at post-secondary institutions".¹⁰

More recently, the report from Canada's Fundamental Science Review (also known as the Naylor report) noted that "research is ultimately about harnessing the power of human ingenuity and creativity" and that scientific research is, more than ever, an international activity. In a globalized research world, actions to demonstrate capabilities and showcase achievements play an important role in facilitating the exchange of knowledge and formation

⁷ Treasury Board of Canada, *Policy on Results*, 2016, Appendix A: Definitions. (www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=31300)

⁸ Department of Finance Canada, (2008), *Budget Plan: 2008*, Ottawa, p116.

⁹ Department of Finance Canada, (2017), *Budget Plan: 2017*, Ottawa, p44. (www.budget.gc.ca/2017/docs/plan/toc-tdm-en.html)

¹⁰ *ibid*, p46.

of collaborative arrangements. These exchange processes are bi-directional, as observed in the Naylor report, connecting Canada to the world and the world to Canada.¹¹

The Gairdner Awards function in a similar way in that they recognize outstanding biomedical research conducted anywhere in the world and showcase significant research advances, and the people performing that research, to universities and high schools throughout Canada. Canada's support for the Awards reinforces the importance given to biomedical research in Canada and serves to inform and inspire current and prospective future researchers. The Naylor report also highlighted the role of major international prizes and awards as indicators of the quality and impact of research.¹²

The Gairdner Awards are generally recognized, along with the US-based Lasker Awards, as being a "predictor prize", that is, one that provides early notice of prospective winners of Nobel Prize in physiology or medicine, or chemistry. In this regard, 90 of the 353 International and Global Health laureates between 1959 and 2017 also received Nobel Prizes, which suggests that Gairdner winners have a 25% likelihood of also receiving a Nobel Prize.¹³

A second aspect of the predictive nature of the Gairdner Awards is the elapsed time between receiving a Gairdner Award and a Noble Prize, or the extent to which the Gairdner selection committees "spot" researchers who go on to win Noble Prizes. In this regard, 32 of the 50 recipients of the Noble Prize in physiology or medicine (64%), and 6 of the 49 recipients of the Chemistry prize (12%), between 1997 and 2017 were Gairdner laureates. The median amount of time between receiving a Gairdner Award and a Nobel Prize for the 38 dual winners was 7 years, with a range from zero (that is, same year) to 24 years.¹⁴

Canadians accounted for 43 of the 353 International and Global Health laureates (12%). As such, the role of the Gairdner Awards as a "predictor prize" and the degree to which Canadian-based researchers feature among the laureates suggests that the Awards could function as an indicator of the relative strength of Canada's performance.

B. Need for the Awards and Rationale for Public Support

Clearly, there is an ongoing opportunity to grant Gairdner Awards that recognize outstanding contributions to biomedical research. From a relevance perspective then, the question is whether the Gairdner Awards provide continuing value to Canada and, as such, warrant continued public support. Stakeholder representatives interviewed were strongly supportive of the role and value of the Gairdner Awards. A combination of themes in the interviewees' comments indicate a continuing need for the Awards as a contributor to positioning Canada's support for biomedical research internationally and means of encouraging students and trainees to consider careers in biomedical science. In particular:

¹¹ Canada's Fundamental Science Review (2017), *Investing in Canada's Future: Strengthening the Foundations of Canadian Research*, pp18-19. (www.sciencereview.ca/eic/site/059.nsf/eng/home)

¹² *ibid*, pp46-47.

¹³ Based on Gairdner (gairdner.org/winners/index-of-winners/) and Nobel (www.nobelprize.org/nobel_prizes/) lists of laureates.

¹⁴ *Ibid*.

- The Canada Gairdner International Awards have a longstanding reputation and visibility in the global biomedical research community for recognizing outstanding research, and functioning as a “Nobel predictor”. The Global Health Award is more recent (first awarded in 2009) but is expected to achieve a similar position in the global health research¹⁵ field.
- This reputation is built upon rigorous adjudication processes that serve to choose the best-of-the-best researchers in the world whose work combines knowledge breakthroughs with significant potential impacts on health.
- The outreach program enables faculty, trainees and high school students to engage with outstanding researchers. Outreach events provide opportunities for knowledge exchange, relationship-building and, in the case of high school students “tweaks their interest or solidifies what they want to do after high school”.¹⁶ At the same time, Canadian biomedical researchers and their institutions have the opportunity to demonstrate the range of research capabilities present within Canada.
- International outreach – in the form of receptions for laureates in their home countries – provides additional opportunities to recognize outstanding biomedical research, promote the Awards, encourage Award nominations, and communicate the openness of the Canadian research community to international collaboration.

Taken together, these core attributes of the Awards demonstrate that the value derived by Canada from the Awards is aligned with the goals of the federal government’s innovation agenda. They demonstrate Canada’s commitment to supporting and recognizing world class research, providing opportunities for Canadian researchers to engage with the best-of-the-best biomedical researchers, and encourage students to consider careers in science fields by exposing them to the life stories and achievements of these best-of-the-best researchers.

While the development of the international profile and prestige of the Gairdner Awards may be somewhat serendipitous – although clearly based on the vision of James Gairdner to recognize science that makes possible breakthrough discoveries – the benefits accruing to Canada would be very difficult to realize in the absence of the Awards. In particular, it could be expected that the ability to attract groups of outstanding biomedical researchers each year to undertake cross-country tours where they share their experiences and ideas with researchers, trainees, students and interested members of the public, and to participate in symposia on key health issues of the day would be very difficult to establish from scratch. The prestige of the Awards and their track record in recognizing outstanding researchers has a value to Canada that would subjectively appear to exceed the level of public funding from the federal government.

Similar observations on the value of awards such as the Gairdner and Lasker Awards were made by David Naylor (of the Naylor report) in an op-ed piece in JAMA in 2015. He noted that prestigious awards can generate media coverage that increases public awareness of biomedical research, foster relationships between winners and local scientists via outreach events, stimulate interest in bioscience careers among students, and provide policy makers with “a

¹⁵ Defined by the CIHR as “the study of health issues related to the low and middle-income countries (LMICs) of the world and, more broadly, the health, health-system, health inequities, and health policy challenges facing populations living in conditions of vulnerability”. (www.cihr-irsc.gc.ca/e/31562.html)

¹⁶ Interview comment by one of the Foundation’s outreach coordinators.

sense of the global competition for scientific leadership”. The article also noted that “the jurisdictions that host prizes draw attention to their commitment to excellence in science”, and that “major prizes are sometimes initiated by philanthropy but later cross-funded by government”.¹⁷

¹⁷ Naylor C.D and Bell J.I.B (2015), “On the Recognition of Global Excellence in Medical Research”, *JAMA*, Vol. 314, No. 11, p1125.

IV. EFFECTIVENESS

Effectiveness refers to the extent to which a program or initiative is achieving its expected outcomes. For this evaluation, three questions relating to effectiveness were examined, one concerning the achievement of the five expected outcomes (listed on page 10), the second concerning actions taken in response to the recommendations of the 2013 evaluation, and a third, forward-looking question about the level of support for a potential additional Gairdner Award. The analysis of these questions was based on the findings from the key informant interviews and data on the numbers of, and attendance at, events.

A. Achievement of Expected Outcomes

Key informants were asked to comment on the extent to which they thought each of the expected outcomes are being achieved. They were also asked to rate the level of perceived achievement using a five-point scale (between “1 - Not at all” and “5 - Entirely”) as a way of summarizing the degree of achievement.

1. Recognizing and rewarding international excellence in fundamental research that impacts human health

Canada Gairdner International Award. Key informants’ (n=24) ratings of the extent to which the International Award contributes to the achievement of this outcome were all in the range from “to a large extent” to “entirely”. Common reasons for this rating related to:

- The Awards have a rigorous adjudication process so the laureates are really the best-of-the-best, and this is borne out by the numbers that subsequently receive Nobel prizes. A number of key informants familiar with the work of the two adjudication committees noted that being invited to serve on a Gairdner committee is also highly valued. Participation exposes members to leading-edge research and provides opportunities to interact with leading researchers, which compensates for the amount of work involved.
- The work of the laureates demonstrates results that lead to better understanding of diseases and beneficial impacts on health care in the developed and developing world.
- Quality of nominations is very high (“outstanding”).

John Dirks Canada Gairdner Global Health Award. The level of familiarity with the Global Health Award (and the Wightman Award) was not as high among key informants compared to the International Award. Consequently, ratings of the degree to which these two Awards were contributing to the achievement of the expected outcome were provided by fewer key informants or were provided in the form of ratings of the overall performance of all Award categories.

Key informants who rated the Global Health Award tended to see it as being slightly less effective than the International Award, with ratings falling in the range from “to a moderate extent” up to “entirely”. Comments mostly related to:

- The Global Health Award is relatively new – first awarded in 2009 – and is still building awareness and recognition in the global health research community and among

prospective nominators. According to the key informants who are familiar with the process, nominations to date have been world-class, and the selection process is, like the International Awards, very rigorous.

- The Global Health Award is believed to be the first international award of this nature and, as such, has a unique opportunity to extend the Canada Gairdner brand in a way that complements the International Award.
- Early signs are very encouraging; one of the nine laureates subsequently received a Nobel Prize.

Some key informants indicated that they did not have a good understanding of where the Global Health Award “fits” and that its distinctiveness, relative to the International Awards, should be made clearer in communications and promotions.

Canada Gairdner Wightman Award. Ratings of the degree to which the Wightman Award is perceived to be contributing to the recognition of international excellence in fundamental research were more varied than for the other two award categories, with key informants being more likely to perceive it in terms of contributing to a “moderate” or “large” extent. Reasons for these lower ratings related to:

- The change from an occasional award to an annual award has been beneficial; it encourages nominations and draws attention to people who have performed world-class research and made major contributions to sustaining research efforts in their fields.
- Wightman Award laureates are on par with the International Award winners but are not necessarily recognized as such. Communications regarding the Wightman Award need to emphatically note that it is not a “consolation” or “lifetime achievement” award but is on par with the other two awards in terms of the emphasis on outstanding research and impacts.
- It is difficult for the Wightman committee to find an optimal balance between leadership in biomedical science and institutional leadership, for example, in comparing someone who is a great institutional leader but maybe not quite an outstanding scientist, and vice versa. The decisions may depend on the composition of the adjudication committee in any one year, and may not be entirely consistent from one year to the next. Guidelines to nominators may benefit from clarification of this aspect, and thereby encourage more nominations. Positioning of this Award may also benefit from emphasizing its dual focus in the laureates’ citations.
- Opportunities exist to encourage both nominations of deserving female scientists and increase female representation on the adjudication committee.

A number of key informants encouraged the Foundation to more proactively diversify the gender and national-international balance in the adjudication committees for all three awards, for example, to expand representation from the developing world on the Global Health committee.

2. Inspire the next generation of scientists by promoting the value and impacts of scientific research through education and outreach activities targeting research faculty and students, and high school students

Ratings of the degree to which this outcome is being achieved were spread across the range from “to a small extent” to “entirely”. Reasons for rating performance at the high end of the scale mostly related to the following (with illustrative comments by interviewees in italics).

- These presentations always attract a lot of attention from faculty and researchers, especially if the visiting recipient’s work is relevant to the work of the local faculty and they are good speaker.
- Events for high school students are typically very inspiring, especially when the speakers tailor their presentations to the context of the students or if the students have the opportunity to see, and do, hands-on science activities (as is done in Saskatoon, at VIDO) as part of the day’s activities. High school students rarely have the opportunity to interact with a scientist and hear how they became successful and why they chose to be scientists. The Award laureates also enjoy these events greatly.

“Jennifer Doudna (2016 International Award) is a strong advocate for women in science (she has a Ted talk, etc.). It was the first time at the Gairdner that there was a line of people lined up to take selfies with Jennifer. So, in terms of inspiring the next generation of scientists – yes, they do that almost better than anyone else.”

- Different locations have developed different approaches to structuring Gairdner visits, particularly for high school students, to maximize the opportunities to expose students to great science and to promote their institutions. Variations noted in the interviews included presentations by laureates combined with hands-on science activities, facility tours, and in one instance, a visit by a laureate to a local high school.
- Gairdner laureates work hard during their outreach visits. The universities really try to connect the laureates to faculty and students through all manner of events and groups. For example:

“Rod Barrangou helped judge posters and he made himself available for 15-20 minutes for one-on-one conversations with students. He even decided after looking at the agenda that there was 30 minutes of free time so he offered a presentation on how post-docs could advance their career. The year before Lynne Maquat delivered a lunch time lecture on promoting (the advancement of) women in science. We look for every opportunity we can to connect the Gairdner award with the faculty/students.”

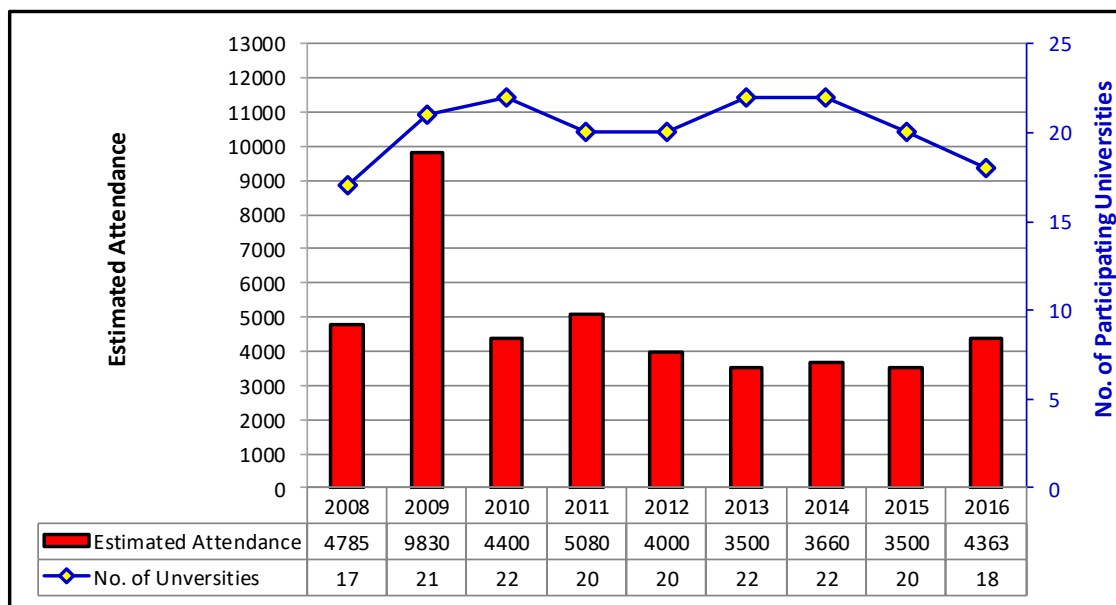
- The outreach events are the principal differentiator for the Awards (compared to other internationally prestigious awards). Could be more so if the Foundation is able to develop more of a year-round presence.
- The symposia and lectures during Awards Week are “*fantastic: brilliant topics and presenters*”.

Key informants who gave lower ratings (achieved to a small or moderate extent) explained their ratings in such terms as:

- The outreach visits to universities are only for one or two days a year so while they are good events it is not like there is an extended number of opportunities to publicize the Awards and laureates. Having more events throughout the year could result in a greater impact, although this would be challenging given the Foundation's resources and limits on the availability of current and past laureates.
- Would like to see the level of outreach activity grow, to reach and inform or influence more people about the value of research, if possible (and kudos to the Foundation for what they currently achieve). Medical faculties could be more engaged, to help the Gairdner increase its reach.
- In Toronto, unlike a lot of other centres in Canada, there are a lot of high calibre speakers and events throughout the year so it can be difficult to draw significant numbers of faculty, trainees and students to some Gairdner presentations.
- High school events are very good for those who can attend but there are quite finite limits as to how many can be accommodated versus the number of high schools and student that could potentially attend. There is also the question of whether these events have lasting impacts.
- Many challenges are encountered in getting high school students to Gairdner events. It is necessary to take students out of school for a day, it is costly to bus the students to the universities, and there is often a lot of competition from other school-based activities.
- Laureates need to tailor their presentations for the high school students; some do a better job at this than others.

Data compiled by the Foundation on event and audience numbers are shown in Exhibit 4.1 (national outreach to university faculty and researchers) and 4.2 (high school outreach).

Exhibit 4.1 National Outreach to University Faculty and Researchers



(Source: Gairdner Foundation data.)

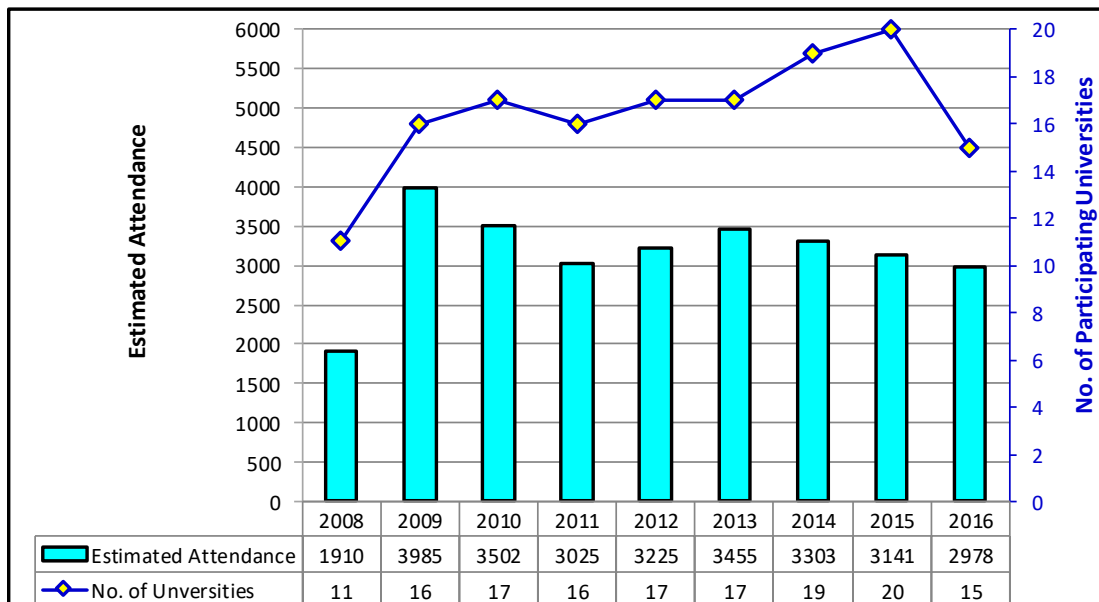
In 2008, the level of outreach activity had yet to fully benefit from the inflow of funding from the newly granted federal government endowment. Between 2009 and 2015 the number of locations for university outreach events varied between 20 and 22. In 2016, the number of locations was reduced to 17 as part of a re-evaluation of approaches to hosting events with a view to maximizing overall participation and impact.

With the exception of 2009, when the Foundation celebrated its 50th anniversary and attendance was almost 10,000 the estimated attendance by faculty, trainees and students has ranged between ~3,500 and ~5,080. Between 2012 and 2016 attendance levels were quite stable, between ~3,500 and almost 4,400. These levels are, in many instances, at the maximum levels allowed by the meeting facilities available for these events.

Events with faculty, trainees and students also include lectures, symposia and other meetings in Toronto during the Awards Week. Lectures by laureates attract audiences of between 350 and 700, depending on the laureates and their fields of work; global health symposia (held in 2013, 2014 and 2015) attracted 200 to 250 people; and, other special lectures and symposia attracted between 200 and 500 people. In 2016, the *Minds that Matter* event, featuring lectures by all 2016 laureates, attracted ~600 attendees and a symposium on gene editing, featuring laureates and other leading scientists, attracted ~300. The Foundation has also webcast the proceedings of key events in recent years in order to broaden the audience base, for example, the webinar coverage of the two Toronto events attracted ~1,200 subscribers.

In addition, the Foundation has taken advantage of opportunities to participate in other research symposia and public events throughout the year by partnering with research institutes, provincial government ministries (notably in Alberta), and research funding foundations. Speakers at these events often include past Gairdner laureates. Events have been held in Edmonton, Calgary, Ottawa, Vancouver, Toronto (York University) and Hamilton, attendance ranged between ~800 and ~1,350 per event.

Exhibit 4.2 Outreach to High School Students



(Source: Gairdner Foundation data.)

The number of locations hosting high school outreach events grew consistently from 2008 to 2015, from 11 to 20. In 2016, the number was reduced due to the previously referenced re-evaluation of planning approaches and strategies. Attendance at these events was relatively stable from 2010 to 2016, ranging between a low of just under 3,000 in 2016 to a high of 3,500 in 2010. As with the events for university faculty and researchers, these attendance levels are mostly at the effective maximum levels that can be accommodated in each location. In some years, planned levels of attendance in some locations have been affected by events outside the Foundation's control, such as weather events and industrial action by teachers. Centres that consistently host the largest numbers of students are the universities of Alberta, Toronto, York, and Carleton. Notable too, is the number of universities in smaller centres that also host relatively large events, such as Lakehead, Lethbridge, Saskatchewan, and Memorial.

The success of the Foundation's outreach programs to science and medical faculty indicates that these presentations are typically "must see" events that are often considered to be annual highlight events at many institutions. The participating universities use the presentations by laureates to high school students as focal points to showcase their education programs and facilities to prospective students. According to one key informant, who has been closely involved with the Awards in several roles, the profile of the Gairdner Awards in the biomedical research community and the benefits universities derive from their association with the Awards provides a unique opportunity for the Foundation. In essence, they suggested, the Foundation could encourage "competition" among the participating institutions to build multi-year collaborative arrangements that strengthen the outreach programs for mutual benefit.

3. Increase awareness among members of the public, policymakers and other stakeholders of the impact of health science on everyday lives through education and outreach activities

Key informants were most likely to perceive that the Foundation and Awards was less effective in achieving this expected outcome. Slightly more than half of the key informants who rated the Foundation's performance (26 of the 36 respondents) believed that it was being achieved "to a small or moderate extent" only, with the balance perceiving it to be achieved "to a large extent".

Comments on this level of performance rating related to:

- The Awards usually get media attention during the outreach and Awards week events but it is difficult to sustain awareness during the rest of the year.
- General awareness of the Gairdner Awards is low and, according to one key informant, is also low for many other organizations involved with funding and conducting biomedical research.
- Public events – versus events more targeted to faculty members that members of the public can also attend – might help, if suitably publicized and the content tailored to the nature of such audiences.
- Publicity in advance of events as well as coverage of the laureates during their visits may aid the effort to increase awareness.

- The Foundation needs to have introductory/overview videos and other material that is readily accessible (for example, on YouTube) at any time and/or likely to show up in on-line search queries.

Reasons by those who rated the performance higher:

- The Awards gala is not just for the biomedical research community but brings together a very diverse mix of stakeholders. It is not unusual to have federal and provincial ministers, and even premiers. Attendance at these events provides a powerful opportunity for the research community to demonstrate and reinforce the value of biomedical research and the impacts that flow from such work.
- Some research topics recognized by the Awards, such as the development and application of CRISPR in 2016, attract more media attention and contribute to awareness of the Awards and the impacts of biomedical research. The challenge is to sustain the interest and awareness from one year to the next.
- The Foundation staff have worked hard to foster media relations but it is very competitive to get, let alone maintain, media attention in today's world so the payoff from these efforts is not always visible.

A number of the key informants also noted that this is a very ambitious target for an organization with limited resources whose primary priority is to run an awards process and undertake outreach targeting the research and school communities. Given this constraint, they suggested that the Foundation must target its wider awareness building activities carefully. Undertaking a sustained campaign to build awareness among the general public was not believed to be feasible by these key informants, but targeting people who are interested in science and society topics may be possible using the Internet and social media tools in combination with mass media coverage by the Foundation's traditional media partners.

Some key informants also noted that increasing awareness among policy makers at the political level and among senior public servants is a role that is best achieved through personal relationships with these decision-makers and advisers, ensuring they have opportunities to meet and hear laureates, and to attend the Awards dinner and research symposia. At the same time, the Foundation also needs to carefully manage the nature of its advocacy activities given its status as a charitable corporation that is heavily reliant on public funding.

4. Increase international awareness of the Awards and Canadian health research, leading to broader participation on adjudication committees and greater numbers of nominations from around the world through marketing and communications activities

Ratings of the Foundation's performance in increasing international awareness of the Awards and Canadian health research were quite uniformly distributed between "to a moderate extent" and "entirely" (excluding one outlier who gave a "not at all" rating). Reasons for these ratings included:

- The Foundation's ability to undertake international receptions in laureates' home countries has been greatly enhanced by the additional funding provided by the federal

government for this purpose. The involvement of the Canadian government provides an opportunity for Canada to engage in science diplomacy and enhances the ability of the Foundation to engage with the science communities in laureates' home countries. This recognition "at home" is valued by laureates.

- Receptions provide opportunities to increase awareness of Canadian capabilities but this is subordinate to the recognition of the laureates, encouragement of nominations and stimulating interest in participation on adjudication committees. Receptions also provide opportunities for Foundation representatives to establish personal links with international research and institutional leaders.
- Building the profile of the Global Health Award internationally is particularly important. In order to do so the Foundation has to reach and engage with a different research community, encourage growth in the flow of high quality nominations, and identify prospective members of the adjudication committee.
- Some key informants questioned the inclusion of increasing international awareness of Canadian health research in the outcome statement. They felt that the Awards are not really about Canadian research per se but about recognizing international excellence. The suggested the association of Canada with the Awards, and the national outreach activities, serves to position Canadian health research within the international milieu.
- International receptions do a good job in reinforcing and building the profile of the Awards in locations where they have an established reputation. However, there is still the challenge that awareness may be lower in other countries with noteworthy researchers. Targeted outreach to these countries or regions could further broaden the base for generating high quality nominations.

While not mentioned in any interviews, the role of the Foundation's partnership with the Consortium of Universities for Global Health (CUGH) should also be highlighted as a useful step in building the profile of the Global Health Award. The mission of the CUGH is to build interdisciplinary collaborations and facilitate knowledge sharing to address global health challenges.¹⁸ Global Health Award laureates have been the keynote speakers at the CUGH's annual conferences since 2014, where they are introduced by the President of the Foundation.

5. Build and sustain the financial base for the Awards by expanding support from other government, not-for-profit and private sponsors and partners

Between 2009 and 2016, the Foundation's annual revenues ranged between \$2.36 and \$3.37 million, with the peak year, 2009, being the Foundation's 50th anniversary. Revenues fell from \$3.37 million in 2009 to \$2.36 million in 2011 and then recovered in subsequent years to reach \$3.21 million in 2016. Revenue growth between 2011 and 2016 benefited most from increased endowment income (linked to increased returns in financial markets) and growth in the number and value of government grants. Contributions and sponsorships from private sector companies and not-for-profit organizations have declined while table sales have been relatively stable.

¹⁸ CUGH website. (www.cugh.org)

Only key informants who were either Foundation staff, Board members, sponsors or representatives of participating universities and research institutions were asked to rate the Foundation's performance in building a sustainable financial base for the Awards. Those who felt sufficiently well-informed to provide a rating (8 of the 36 respondents), were most likely to believe this outcome was being achieved "to a moderate" extent.

Representatives of the sponsors of the Awards and Awards-related events noted that the Foundation did not have strong expertise in planning, building relationships with sponsor representatives, and securing sponsorship funding; that many sponsors are not in a position to increase their level of support each year; and, the competition from other charitable organizations seeking funding is intense. One of these key informants was quite critical of the Foundation's fund-raising efforts. They suggested that the Foundation needed to strengthen the internal capacity to ensure it has the right skill set to be a "best in class" fundraiser, able to market the "value proposition" of the Awards and develop longer-term funding arrangements. They also emphasised that broader awareness of the Awards is also key to attracting sponsorship support. A number of the others appeared to perceive that, by virtue of the Foundation's endowment funding from the federal and Alberta governments, it is well-funded and perhaps does not need to be seeking increased levels of support from other sponsors. In contrast, others did recognize that the Foundation was achieving a lot with the finite resources available to it but achieving further growth and sustainability will be a major challenge for the Foundation and its Board.

One of these sponsors summarized the importance of relationship building in the following terms:

"Relationship building is very critical to getting sponsorship and donations. So, a good starting point is getting to know the funders, getting to know what that funder supports and what they do not support. If a donation request is not directly aligned with the strategy of the (sponsoring) organization, they will not sponsor. ... From our perspective (as a funder), when we are approached by organizations that request funding from us, when the requesters are prepared, they've done their homework etc., then there is a greater chance that we will accept to fund them."

Foundation managers and Board members who participated in the interviews noted that a new strategy for securing sustainable funding was being rolled out during 2017 with a goal of increasing the level of multi-year funding from all sources. The limited resources available to the Foundation mean that this effort has to be carefully targeted and sustained in order to pay off. In this regard, one respondent indicated that it takes a minimum of 18 months to develop relationships to the point where a significant donation may be realized. An ancillary goal of the funding strategy is to increase the funding base to the point where the value of each Award could be increased.

Other key informants noted that attracting funding support for outreach events, such as, covering the costs of bussing and other elements of the high school events may be the best area to attract additional funding. Current (and prospective additional) sponsors value the opportunity to obtain a local presence that is closely aligned to their desired positioning vis-à-vis youth and education-oriented activities.

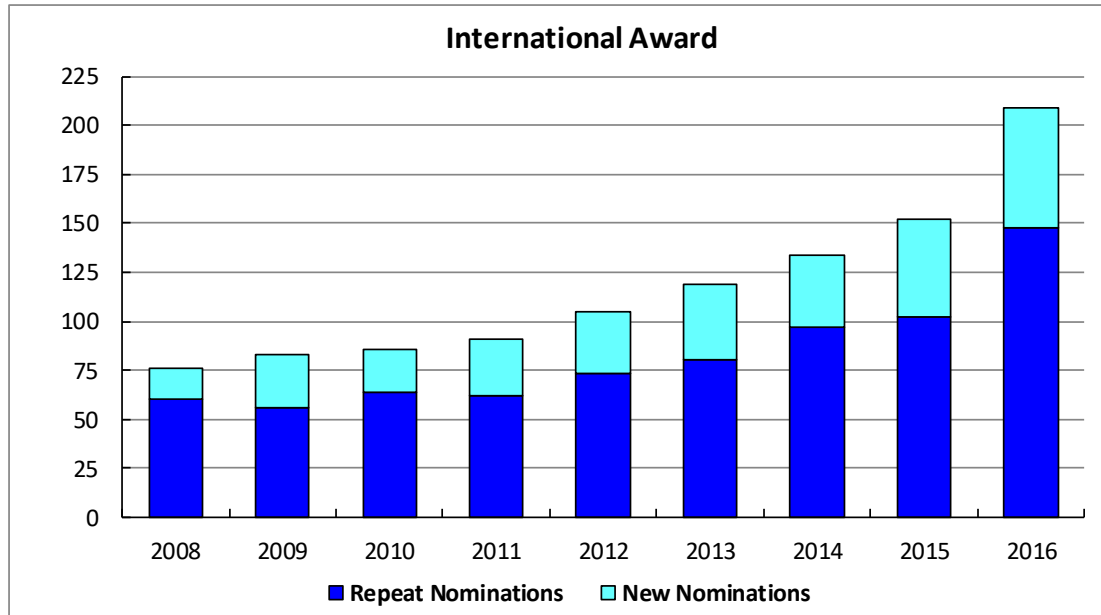
B. Actions Taken in Response to the 2013 Evaluation Findings

The 2013 evaluation of the Awards included a number of suggested actions that could be taken by the Foundation to strengthen program delivery, subject to there being sufficient funding and resources available. Proposed actions related to:

- ***Funding growth and stability:*** Expanding efforts to attract additional funding to put the Foundation's activities on a more secure and sustainable footing.
- ***Nomination and adjudication processes:***
 - Continuing to develop actions to proactively solicit high quality nominations and providing potential nominators with information on best practices in preparing nomination packages.
 - Enhancing the feedback from the MAB to the MRP to help the MRP members better understand how the MAB weighs the evidence before it.
- ***Support for outreach programs:***
 - Strengthening the support provided to outreach coordinators to enable the sharing of lessons learned and best practices.
 - Assessing the feasibility of partnering with other organizations with complementary mandates to extend the reach of the outreach program.

As noted previously, the environment for attracting financial donations is very competitive and a new fund-raising strategy has been developed to guide efforts to attract more sponsorship. Some encouraging early success has been achieved, in the form of a partnership with the Fonds de recherche du Québec (FRQS) that will provide \$300,000 over three years to bolster the delivery of student, faculty and public lectures and academic symposia throughout Quebec. Also, as previously indicated, the Foundation obtained funding over six years from the federal government to support international outreach aimed at increasing nominations, enable all adjudication committees to hold face-to-face meetings (previously limited to the International Award committees), and increase the amount of promotional material made available for the high school and national outreach programs. Finally, they noted that interactions between outreach coordinators continue to be conducted on an ad hoc basis or rely on the Foundation's outreach director to act as a channel for advice and guidance. Outreach coordinators confirmed this and highlighted the desirability of strengthening the sharing of lessons learned and best practices in a more structured way.

Data on the trends in nomination numbers for the International Award categories (Exhibit 4.3) show year-on-year increases in every year since 2008, including a 37.5% increase in 2016 to go over 200 for the first time. Several key informants suggested that growth in nomination numbers creates substantial additional work for the adjudication committees, particularly the MRP. Introduction of sub-groups to conduct more detailed advance reviews of nominations and initial triage assessment of nominations by the scientific directors were seen to be constructive ways of managing some of the workload involving in assessing nominations. Several also suggested that it may be desirable to limit how many years in a row someone can be nominated to further manage the workload involved in reviewing nominations.

Exhibit 4.3 Trend in the Number of International Award nominations


(Source: Gairdner Foundation data.)

Nominations for the Wightman Award exhibited growth from 2009 to 2011 (17 to 26) followed by a reduction to 16 in 2012 followed by renewed growth to reach 27 in 2016. Nominations for the Global Health Award grew year-on-year from 23 in 2008 to 41 in 2011. A review of nominations at that time identified that many repeat nominations were not being updated or were not considered to be strong enough to merit consideration, and excluded from further consideration. In subsequent years the total numbers of nominations fell as the emphasis shifted to attracting new nominations of well-qualified candidates. Compared to the International Awards, these two Awards are relatively new (Global Health) or only recently granted on an annual basis (Wightman), and the Foundation recognizes that an expanded effort is necessary to stimulate nominations for these awards in their respective research communities. Rates of new versus repeat nominations averaged 30% for the International Awards, 24% for the Wightman Award, and 32% for the Global Health Award between 2008 and 2016.

Among the key informants who were members of an adjudication committee, several noted that feedback from the MAB to the MRP is a responsibility of the co-chairs of the MRP and the Foundation's Scientific Directors who function as a bridge between the two committees. These key informants did not have any concerns about the functioning of the two committees and cautioned that, because of the confidential nature of the committee discussions, there is a limit to what can be shared with MRP members.

The feasibility of partnering with another organization to extend the reach of the high school outreach program has been discussed within the Foundation and a number of opportunities considered. In one instance, the Foundation was approached to partner on another initiative aimed at high school students but could not commit to the required level of support and had to pass.

Outreach coordinators observed that things have improved in a number of areas, listed below, but opportunities for interactions and sharing of lessons learned among and between coordinators are limited, with most being informal one-on-one contacts with selected other coordinators or with the Foundation's outreach director. The areas where changes have been observed were:

- Quality and applicability of speakers' presentations to high school students have improved over the years. Guidance from the Foundation to laureates on presenting to these audiences helps to ensure that these talks are more likely to resonate with high school students.
- Materials from the Foundation to support Award-related communications and promotions have improved in quantity and quality, and are now more tailored.
- Support for live streaming of local events and ongoing Internet access to content has helped to broaden the potential audience and increase the impact of local events. The opportunity to submit questions by text has made it easier for students to ask questions. When content is relevant to curriculum topics it can be accessed during subsequent classroom activities.
- Flexibility to adjust the timing of visits and have some input into the choice of speakers has improved slightly, recognizing that the scope for changes will always be limited. Details of who will be visiting and when need to be finalized as early as possible to afford maximum time for event planning, logistics arrangements and local promotions.

In summary, the Foundation has made some notable progress in securing additional funding from public sector sources and is targeting additional growth as its new funding strategy is rolled out during 2017. Sponsors suggested the Foundation could benefit from additional marketing and fundraising capacity to maintain ongoing relationships with prospective and current sponsors, and to identify and follow through on potential opportunities. Additional funding from the federal government has enabled the Foundation to increase international outreach and encourage nominations. Nominations for the International Award have increased to the point where managing the volume of review work has become quite a challenge for the adjudication committees. Nominations for the Global Health and Wightman Awards have been stable or increased slightly. The need for sustained effort to stimulate nominations for these Awards has been recognized. The quality of outreach activities, particularly to high schools, has also benefited from the additional federal funding. However, outreach coordinators continue to work in relative isolation with limited opportunities to share lessons learned and best practices.

C. Level of Stakeholder Support for a Young Investigator Award

A large majority of key informants indicated that, while there could be merit to an award for young investigators, they were ambivalent about the idea of it being a Gairdner Award. A number of others were outright opposed to the concept. A series of themes ran through the comments relating to the challenges that they expected to arise, as follows.

- Many key informants were concerned that a young investigator award would be conceptually quite removed from the focus of the existing Awards on science with impacts, and could potentially dilute the value of the Gairdner brand.

- The addition of a completely new category of Award would require a significant increase in funding, to cover the amount of the award (presumably \$100,000); to promote, administer and adjudicate the new award; and, include an additional participant in the outreach and Awards Week events.
- Defining the criteria for evaluating nominations and assessing the promise of the nominated young investigators (compared to assessing the impacts of current Gairdner nominees) would be highly complex. For example, what would the definition of a “young investigator” be, do you use an age cut-off or type of position held, and how would the achievements of nominees be separated from the contributions of others and/or mentors, especially as biomedical research becomes more team-based and multi-disciplinary?
- There are an increasing number of awards aimed at recognizing outstanding young investigators so it may be a crowded field for Gairdner to enter. In Canada, there is the CIHR Gold Leaf Prize for achievements by a young investigator, with a value of \$100,000, and the Royal Society has established a College of New Scholars, Artists and Scientists for people at early stages in their careers to contribute to the work of the Society. Internationally, there are a number of young investigator awards with significantly higher values than the Gairdner Awards that are garnering a lot of attention. For example, the Blavatnik Award comes with \$250,000 and the HHMI Faculty Scholars Program for “accomplished early career researchers who have strong potential to make ground-breaking contributions to the life sciences” provides up to \$1.8 million per awardee in research funding over periods of up to five years at institutions across the US.¹⁹
- The potential volume of nominations is likely to be much greater than for the current Gairdner Awards, both from within Canada and internationally because, in the words of one key informant, you are looking at the lower levels of the pyramid, not the pinnacle. Consequently, the Foundation may need to develop a different approach to administering the award and assessing the nominees’ merits.
- Finally, several key informants pointed out that the International Award already considers outstanding young investigators as potential laureates, such as, Feng Zhang (2016 International Award laureate) who is also a HHMI Faculty Scholar.

Several of the key informants suggested that an Award for high school students may have merit rather than a young investigator award. However, as noted by a Foundation representative, there is an existing award for high school research projects, the Sanofi Biogenius Canada (SBC) program. As such, the Foundation may want to consider some form of partnership with Sanofi rather than introduce a potentially competing award.

Finally, a number of the key informants noted that, notwithstanding the types of reservations expressed above, the topic of potentially introducing additional award categories is one that the Gairdner Board should have regular discussions about, and possibly develop a set of criteria to assess any potential opportunities and facilitate decision-making regarding such opportunities.

¹⁹ Howard Hughes Medical Institute, *Faculty Scholars Program*. (www.hhmi.org/programs/biomedical-research/faculty-scholars)

V. EFFICIENCY

This section examines the extent to which the Foundation has taken steps to improve the efficiency of its key activities as well as the potential to achieve additional efficiencies. This analysis is based on the comments provided by key informants with regard to the extent to which intended outcomes and outputs are achieved or produced at least cost, leading to the best use of available resources.

A. Context for the Foundation's Financial Management

As a starting point, it is important to understand that the Foundation has only one business, to select and recognize the winners of the annual Canada Gairdner Awards, which it undertakes with the equivalent of 5.5 full-time employees (which often comes as a surprise to Award laureates and adjudication committee members). Its principal activities are heavily reliant on processes that rely on face-to-face interactions between geographically dispersed people and the organization and conduct of events showcasing laureates is logistically complex.

On average, Award prize money accounted for 29% of the Foundation's annual operating expenses between 2009 and 2016. Award delivery processes – relating to the awards adjudication processes, annual awards gala in Toronto, the annual national and high schools outreach events, international outreach, and associated marketing and outreach activities – accounted for another 34% of annual operating costs, on average. Administration of the Awards and operations of the Foundation accounted for the remaining 37% of costs, and varied between \$735,100 and \$983,100 between 2009 and 2016 (excluding 2014 which included an extraordinary item that increased the cost to \$1.25 million). These costs have been tightly managed to ensure the Foundation is operated within the limits imposed by its funding levels and to avoid drawing on its capital. The major cost items included under administration are staff salaries and benefits, office space and expenses, utilities, travel by staff to Award and outreach activities, Board travel and meeting costs, the Gairdner website, and legal and accounting fees.²⁰

B. Actions Taken to Improve the Efficiency of Activities

A number of actions have been taken in recent years to improve the efficiency and effectiveness of the nomination and adjudication processes, and to increase the reach of the Awards. These actions have included:

- *Nominations processes:*
 - An online submission process was introduced to facilitate submission and management of nominations.
 - More proactive solicitation of nominations of high quality candidates.

²⁰ Proportionate shares of average annual expenses are based on data in the Foundation's annual Financial Statements.

- *Adjudication processes:*
 - A triage process was introduced to screen and “bin” nominations for the MRP, and committee sub-groups now spend time in advance of the full meeting extensively reviewing nominations. These steps may not increase efficiency in the sense of reducing the time per nomination but are intended to enable the MRP members to focus their time together on the better nominations.
 - The length of MAB meetings has been extended to facilitate more careful review and reflection prior to voting. In doing so, the pressure to reach a point where voting can take place before members start leaving to catch flights has been somewhat alleviated. An electronic voting system has also been introduced to reduce the time required to vote and to provide electronic voting records.
- *Increasing the reach of the Awards:* The Foundation has partnered with other organizations with complementary interests to co-host or support research symposia and public events outside the period of the outreach visits and Awards week each October. Some of these events are undertaken through long-standing relationships with university research institutions and arrangements with funding organizations, such as annual symposia in Calgary and Edmonton, and others are more opportunistic. Using partnership arrangements enables the Foundation to increase its reach without having to incur all of the costs involved in organizing and promoting such events.

C. Potential Improvement Opportunities

Key informants suggested a number of areas where the Foundation could make improvements to its processes. For the most part, these suggestions related to improvements in effectiveness, but in implementing such steps there may be opportunities to better utilize resources or control costs. The most commonly suggested areas for improvement were:

- Better planning and preparation for outreach events. Key informants involved in hosting and delivering outreach events identified a number of areas where improvements could be beneficial:
 - Hosting locations have limited input into decisions as to which laureates go where. Interest in different laureates can vary from institution to institution, depending on the major research interests and activities at each location. A closer alignment of speakers to the research topics of interest to faculty could improve the impacts of the outreach to faculty and researchers, recognizing that it will always be difficult to accommodate all preferences. (One senior university representative wondered if the big universities get first choice which would then limit the extent to which the other schools get access to speakers with major appeal to their faculty members. He suggested that some form of rotation of first preferences may help to alleviate such concerns.)
 - The time between the finalization of laureates’ travel schedules and their outreach events is extremely short. The tight timing can make the organization and promotion of the events very challenging, as well as increasing the costs. Earlier notice of who will be visiting also facilitates efforts to secure local sponsorship support.

- The Foundation could be more proactive in reaching out to coordinators to see what they need to improve the impacts of their events. At present, the Foundation is very helpful when coordinators need guidance or assistance but it is mostly reactive. Areas where the Foundation could be more proactive include guidance and assistance with promotions and securing local sponsors, and facilitating the sharing of lessons learned and useful tools.
- Better utilization of social media in combination with traditional media to improve awareness of the Awards and events, and to expand audience access to events. In this regard, one university representative provided an example of effective use of social media:
“We held a Gairdner symposium here in November; we organized it ourselves. And some of the people (e.g. my students) who work with me tweeted etc. and as a result, the event got tremendous exposure. We had to close registration 10 days before the meeting. There was a lot of chatter and communication in the lead-up to the event, they did a fabulous job.”
- Improve the understanding of the Awards nominations process and evaluation criteria among the leadership and senior scientists at biomedical research institutions and faculties of medicine within Canada. Comments by some key informants suggest that there may not be a good understanding of how to nominate Award candidates, which in turn, could limit the volume of high quality nominations. Some key informants also suggested that the provision of information on best practice approaches to preparing nomination packages, and possibly hosting periodic workshops, would also be useful. In this regard, one key informant in a senior position at a university that is a major player in medical education and biomedical research indicated that he did not know how people get nominated and had never been encouraged to nominate anyone even though he had nominated many people for other awards. It was also noted that the quality of a nomination package can influence whether a nomination goes forward for consideration in the adjudication process.
- Consider introducing rules regarding the number of years that people can be nominated for an Award, for example, no more than three years in a row with a break of at least two years before any further re-nomination. Applying rules such as these could help to manage the workload of the adjudication committees.

VI. CONCLUSIONS

The 2017 evaluation of the Gairdner Foundation's Outcomes and Principles was framed to examine the relevance, effectiveness and efficiency of the Awards program, taking into account the requirements of the 2016 Treasury Board of Canada *Policy on Results*. Our findings across each of these areas clearly indicate that the Outcomes and Principles in the Foundation's funding agreement with the federal government are being achieved. The key highlights of these findings are summarized below, and followed by a set of recommendations for action by the Foundation.

A. Relevance

The Gairdner International Awards have a longstanding reputation and visibility in the global biomedical research community for the early recognition of knowledge breakthroughs with significant potential impacts on health, and function as one of a small number of "Nobel predictor" prizes. This position is founded on the vision of James Gairdner back in 1958 to recognize science that makes breakthrough discoveries possible, and would be very difficult to achieve if the Gairdner Awards were one of the many new awards and prizes for research excellence introduced in recent years.

The value of the Awards is a function of a rigorous adjudication process; a unique and highly regarded outreach program that takes laureates to universities across Canada to engage with faculty, trainees and university and high school students; and, international outreach to recognize laureates in their home countries and encourage nominations, allied with an ability to maintain this approach on an ongoing basis. From a public policy perspective, the Awards contribute to positioning Canada's support for world-class biomedical research, openness to international research collaborations, and encouraging students and trainees to consider careers in biomedical science. As such, the Gairdner Awards program is aligned to the central tenets of the government's innovation agenda and warrants ongoing public support.

B. Effectiveness

1. Achievement of expected outcomes

The Gairdner Awards were consistently viewed by key stakeholders as being a "Canadian success story". The extent to which expected outcomes across five performance dimensions are being achieved, and contributing to this success, is summarized below.

a) Recognizing and rewarding international excellence in fundamental research that impacts human health

The Foundation is consistently achieving this outcome as demonstrated by the esteem in which laureates are held in the biomedical research community, both nationally and internationally, and the recognition of the Awards as a "Nobel predictor". This position is underpinned by the rigorous adjudication process and focus on recognizing breakthrough results in biomedical research that are expected to lead to significant health benefits.

The Gairdner International Awards are seen to particularly successful. The Global Health Award is more recent and extends the coverage of the Awards into the global health field. It is regarded as the first international award that recognizes outstanding work in this field and is still building awareness and recognition. Notably, one of the nine laureates of this Award subsequently received a Nobel Prize. Views on the effectiveness of the Gairdner Wightman Award are more mixed than for the other two Award categories. This Award is the only one exclusively for Canadian-based researchers, and to some extent, runs the risk as being seen as a “consolation prize”. Key informants who have been more closely involved with the Wightman adjudication process did not support this view, indicating that laureates are on par with laureates of the International Award. However, they noted that it can be difficult to find an optimal balance between the two goals of the Award, to recognize leadership in a field of biomedical research and to demonstrate scientific and institutional leadership.

b) Inspire the next generation of scientists by promoting the value and impacts of scientific research through education and outreach activities targeting research faculty and students, and high school students

A large majority of the key informants rated the Foundation’s performance in achieving this outcome quite highly. The presentations by Award laureates are typically “must see” events for research faculty and trainees, especially outside of Toronto where there are fewer opportunities to engage with leading international researchers. High school outreach is a unique aspect of the Awards and is highly valued by the hosting locations and laureates. One key informant who has been closely involved with the Awards in several roles suggested that the Foundation should take advantage of the drawing power of the Awards and laureates to develop stronger partnerships with the participating institutions and to focus outreach efforts on those that are strongly committed to helping to build the profile of the Awards and recognition of laureates.

Some key informants rated the Foundation’s performance against this rating as “moderate”. Their reasons related to the concentration of outreach activities in a single week each year. They would like to have more events throughout the year, with participation by Award laureates, and greater use of electronic media to broaden the audience base for high school audiences.

c) Increase awareness among members of the public, policymakers and other stakeholders of the impact of health science on everyday lives through education and outreach activities

The Foundation has been relatively less successful in achieving this outcome. In large part, this is a function of the Foundation’s limited ability to reach members of the public and policy makers via outreach events. Resource limitations mean that activities and target audiences have to be prioritized, with the primary focus being audiences that are central to the Mission of the Awards and more readily targeted: research faculty and students in universities, and high school students. Given this constraint, the Foundation must target its wider awareness building activities carefully, for example, by using events such as the Awards gala to build relationships between policy makers and research leaders, and encouraging interested members of the public to attend outreach events through targeted communications.

d) Increase international awareness of the Awards and Canadian health research, leading to broader participation on adjudication committees and greater numbers of nominations from around the world through marketing and communications activities

The Foundation is increasing international awareness of the Awards, most notably via receptions at embassies, high commissions, consulates and home institutions of laureates. The ability of the Foundation to expand this activity has been made possible by additional funding from the federal government for outreach activities. This outreach provides an opportunity for Canada to engage in science diplomacy, enhances the ability of the Foundation to engage with the biomedical science communities in laureates' home countries, promote nominations, and identify prospective adjudication committee members. However, the ability to directly increase awareness in countries with strong biomedical research communities but no laureates is limited. The establishment of a partnership between the Foundation and the Consortium of Universities for Global Health, where the Global Health Award laureates are keynote presenters at the Consortium's annual conferences has provided a venue to increase awareness and celebrate the quality of these laureates.

e) Build and sustain the financial base for the Awards by expanding support from other government, not-for-profit and private sponsors and partners

The Foundation has had some success in building the financial base for the Awards but still has a long way to go to establish a strong and sustainable base for operations. A new fundraising strategy is being rolled out during 2017, and implementation of this strategy will need to be a key area of sustained focus given that competition for sponsorship funding is strong and care is needed to ensure close alignment of sponsors' expectations to the goals of the Awards. Key informants representing sponsors suggested that the Foundation needs to strengthen its marketing and fundraising capacities (which are inter-dependent), and build relationships with both prospective and current sponsors if it is to secure additional support.

2. Actions taken in response to the 2013 evaluation findings

The 2013 evaluation of the Awards identified a series of actions to strengthen delivery of the Awards, subject to the availability of resources and funding, relating to funding growth and stability, nomination and adjudication processes, and support for outreach.

The Foundation has made some progress in securing additional funding from public sector sources and anticipates further growth in response to its new fundraising strategy. Nominations for the International Award have increased to the point where managing the volume of review work has become quite a challenge for the adjudication committees. Nominations for the Global Health and Wightman Awards have been stable or increased slightly and the need to further stimulate nominations for these Awards has been recognized. The quality of outreach activities, particularly to high schools, has also benefited from additional federal funding. However, outreach coordinators continue to work in relative isolation with limited opportunities to share lessons learned and best practices, and would benefit from more proactive support from the Foundation.

3. Level of support for a young investigator award

A large majority of the key informants indicated that, while there could be merit to an award for young investigators, they were ambivalent about the idea of it being a Gairdner Award. The key reasons for this ambivalence related to the risk of diluting the Gairdner brand, the additional costs involved with a new award and its administration, the challenges involved in defining a “young investigator” and assessing their achievements and promise, and competition from other, well-funded young investigator awards in Canada and internationally (including the CIHR’s own award). Some stakeholder representatives suggested that the Foundation may gain more by supporting a high school award, possibly in partnership with an existing award. Stakeholder representatives suggested that the Board should periodically discuss options for the further evolution of the Awards and establish criteria to evaluate emerging opportunities.

C. Efficiency

The nature of the Foundation and its activities – with 5.5 FTEs and heavily reliant on a small number of processes that involve face-to-face interactions between geographically dispersed committee members and Award laureates – tends to limit the extent to which significant efficiencies or resource savings can be achieved. Various process improvements have been implemented in recent years to increase the effectiveness and efficiency of key processes. These include the introduction of an online nomination submission process, a triage process to screen nominations for the International Awards prior to their evaluation by the MRP, use of sub-groups of the MRP to evaluate nominations prior to the full committee meeting, extending the length of subsequent MAB meetings to facilitate more careful review and the introduction of electronic voting to support the selection of laureates. The Foundation also partners with other organizations with complementary interests to co-host or support research symposia and public events outside the conduct of outreach visits and Awards week in each October.

Areas with potential for improvement suggested by key informants related to providing more support to outreach coordinators to plan and organize events, continuing to build the use of social media in combination with traditional media to improve awareness of the Awards and expand audiences for events, improving the understanding of the nominations process among the senior staff in Canadian biomedical research institutions and faculties of medicine, and introducing rules to limit the frequency of re-nominating candidates. Participating universities would like to have more input to the choice of speakers for their locations, to match the speakers to areas of specialization in the host universities, and for the lead time between the assignment of speakers and hosting of events to be increased, if possible, to facilitate planning, promotion and cost control.

D. Recommendations

We recommend that the Foundation take the following actions, subject to there being sufficient resources available without compromising the core elements of the Awards program.

1. Nomination and selection of Award Winners

- 1.1 Review the guidelines and selection criteria for the Wightman Award to clarify how the dual emphasis on leadership in a specific field of biomedical sciences at an internationally

recognized level, and institutional academic and scientific leadership in establishing and developing biomedical research, can be optimally balanced.

- 1.2 Investigate the need to increase awareness among science and medical faculty in Canada regarding who can nominate someone for a Gairdner Award and, if need be, undertake promotions to increase awareness and encourage nominations of deserving candidates. Guidance material on best practice approaches to preparing nomination packages should also be distributed to facilitate the preparation of nomination packages.
- 1.3 Investigate the merits of introducing a limit on the number of consecutive years someone can be nominated, and the time period before which they can be nominated again, if the volume of nominations for an Award category grows to the point where it is difficult for adjudication committees to adequately assess all nominations.
- 1.4 Further strengthen efforts to build international awareness of the Gairdner Awards, particularly the Global Health Award, in countries with strong biomedical research communities that have not nominated outstanding researchers to date.

2. Outreach planning and coordination

- 2.1 Review the current process for determining the matching of Award laureates and other speakers to institutions participating in the national outreach program to ensure that the process is transparent and equitable, recognizing that it is not always possible to accommodate the desired preferences of all participating institutions.
- 2.2 As part of the review in recommendation 2.1, determine if the lead time between assigning the visiting speakers and conducting outreach events with a view to providing more time for the hosting institutions to organize their venues, plan promotional activities and seek local sponsorship support.
- 2.3 Strengthen the support for outreach coordinators to enable best practices and lessons learned to be shared, ideally, via periodic regional or national meetings, and to provide guidance or assistance in such areas as promoting outreach events and broadening access for, and engagement with, high school students through the use of technology.

3. Further evolution of the Awards

- 3.1 Periodically review the potential value of increasing the range and/or value of the Awards at the Board level, including establishing criteria to assess the merits of potential opportunities for new Award categories, on either a standalone basis or in partnership with other organizations that recognize and reward outstanding research, while remaining faithful to the Foundation's Mission.

4. Funding growth and sustainability

- 4.1 Continue current efforts to secure additional multi-year funding support from current and prospective new sponsors to put the Foundation on a more secure financial footing.

* * *

APPENDIX A: ANNUAL REVENUES AND EXPENSES

	2008	2009	2010	2011	2012	2013	2014	2015	2016
Revenue									
Investment Income (Loss)									
Gov. of Canada Endowment	\$ 85,695	\$ 840,236	\$ 839,316	\$ 836,562	\$ 856,131	\$ 781,802	\$ 977,890	\$ 903,852	\$ 895,912
Gov. of Alberta Endowment	\$ -	\$ -	\$ 59,782	\$ 42,312	\$ 91,694	\$ 109,488	\$ 106,652	\$ 145,654	\$ 130,758
Other Investments	\$ (139,064)	\$ 333,446	\$ 233,278	\$ (93,549)	\$ 319,072	\$ 613,383	\$ 429,768	\$ 213,375	\$ 539,029
Other Government Grants	\$ 375,000	\$ 911,381	\$ 518,200	\$ 489,342	\$ 372,000	\$ 447,971	\$ 437,701	\$ 573,235	\$ 711,302
Private Sector & Not-for-Profit	\$ 538,554	\$ 901,036	\$ 659,778	\$ 475,986	\$ 457,141	\$ 384,784	\$ 237,208	\$ 415,922	\$ 295,792
Contributions & Sponsorships									
Table Sales	\$ 168,400	\$ 388,297	\$ 517,000	\$ 610,000	\$ 628,000	\$ 628,000	\$ 678,500	\$ 606,250	\$ 640,680
	\$1,028,585	\$3,374,396	\$2,827,354	\$2,360,653	\$2,724,038	\$2,965,428	\$2,867,719	\$2,858,288	\$3,213,473
Expenses									
Awards	\$ 180,000	\$ 700,000	\$ 700,000	\$ 700,000	\$ 700,000	\$ 600,000	\$ 800,000	\$ 700,000	\$ 700,000
National Events	\$ 423,797	\$ 844,836	\$ 585,775	\$ 585,047	\$ 469,146	\$ 590,063	\$ 551,047	\$ 570,808	\$ 602,136
Advisory Boards	\$ 97,878	\$ 100,780	\$ 94,183	\$ 100,651	\$ 110,811	\$ 135,276	\$ 171,263	\$ 225,383	\$ 223,812
Marketing & Communications	\$ 79,505	\$ 144,046	\$ 74,905	\$ 48,491	\$ 41,656	\$ 38,737	\$ 36,155	\$ 140,365	\$ 121,180
Administrative	\$ 717,248	\$ 735,052	\$ 751,146	\$ 869,026	\$ 830,785	\$ 816,903	\$1,246,207	\$ 983,215	\$ 888,535
	\$1,498,428	\$2,524,714	\$2,206,009	\$2,303,215	\$2,152,398	\$2,180,979	\$2,804,672	\$2,619,771	\$2,535,663
Surplus (Deficit)	\$ (469,843)	\$ 849,682	\$ 621,345	\$ 57,438	\$ 571,640	\$ 784,449	\$ 63,047	\$ 238,517	\$ 677,810

Source: Gairdner Foundation, Financial Statements.
[\(http://gairdner.org/about/publications/\)](http://gairdner.org/about/publications/)