



Mr. Lloyd Longfield, M.P.
Chair
Standing Committee on Science and Research
House of Commons
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Dear Colleague:

Pursuant to Standing Order 109 of the House of Commons, I am pleased to submit on behalf of the Government of Canada (the Government) the response (the Response) to the eighth report by the Standing Committee on Science and Research (the Committee) entitled, *Government of Canada's Graduate Scholarship and Post-doctoral Fellowship Programs* (the Report), which was presented to the House on December 12, 2023.

The Government recognizes the importance of investing in science and research to drive discoveries and innovative breakthroughs that generate social, health, and economic benefits for Canada and the world. To remain globally competitive, it is critical that the Government has the optimal structures in place to not only drive life-changing discoveries but also to be positioned to draw on the best available science to support evidence-based policy and decision-making.

The Government also recognizes the critical role that Canada's talent—including graduate students and post-doctoral fellows—plays in producing the knowledge, discoveries, and innovations that encompass our research enterprise. The Government acknowledges that Canada's researchers are facing financial challenges that can be a barrier to pursuing higher education and that these financial pressures can also impact students' well-being.

The Government appreciates the Report's attention to these important issues concerning scholarship and fellowship funding levels, accessibility, and representation. We recognize the importance of maintaining internationally competitive research funding and investment levels, and of ensuring that federal funding approaches are aligned with the needs of the research community including graduate students and post-doctoral fellows. In order to maximize the

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impacts of current and future investments and ensure that federal support for Canada's academic research enterprise is coordinated and cohesive, funding levels and approaches must be considered in concert with efforts to modernize the research support system to ensure success for researchers now and in the future.

The Government extends its gratitude to the members of the Committee and its staff for their work in undertaking the study, developing the Report, and preparing recommendations. The Government also wishes to extend its gratitude to the numerous witnesses who provided expert testimony and to the organizations that submitted written briefs to share their advice, providing the Committee with valuable insight on this important topic. These insights will continue to inform how the Government carries out its responsibilities to invest in the science and research ecosystem and support graduate students and post-doctoral fellows across Canada.

The Response to the Committee's report and recommendations is the product of collaboration between Innovation, Science and Economic Development Canada (ISED), Health Canada (HC), Global Affairs Canada (GAC), Immigration, Refugees and Citizenship Canada (IRCC), the Canadian Institutes of Health Research, the Natural Sciences and Engineering Research Council, and the Social Sciences and Humanities Research Council. The Government has carefully considered the Committee's report and recommendations and is responding along three themes: (1) Increasing Financial Support for Graduate Students and Post-doctoral Fellows; (2) Scholarship and Fellowship Program Design; and (3) Ensuring Student Representation.

Increasing Financial Support for Graduate Students and Post-doctoral Fellows (Recommendations 1, 2)

The Government values the critical role of graduate students and post-doctoral fellows—Canada's future researchers—in producing the knowledge, discoveries, and innovations that help build a strong future for Canada and the world. Graduate students play a vital role in the research ecosystem, making considerable contributions to scientific publications and advancing knowledge while developing their skills and knowledge base. Throughout their studies, graduate students learn how to conduct research and build skills in communication, critical and creative thinking, teaching and mentorship, and collaboration. These collaborations provide the opportunity to engage with partners across research disciplines and sectors, as well as internationally. Nurturing and sustaining talent to develop these competencies alongside scientific research skills is vital not only for the Canadian research ecosystem but for all sectors of our society, including the public, private and not-for-profit sectors.

The Government supports Canada's world-class research enterprise through the three federal research granting agencies—the Canadian Institutes of Health Research (CIHR), the Natural Sciences and Engineering Research Council (NSERC), and the Social Sciences and Humanities Research Council (SSHRC)—along with the Canada Foundation for Innovation (CFI). These organizations play a pivotal role in supporting research, training, and research infrastructure at Canada's post-secondary institutions. The roughly \$4 billion annual federal investment via these organizations feeds the pipeline of novel discoveries and highly qualified talent that underpin and drive innovation. These investments are complemented by several other research funding mechanisms and initiatives supported by the federal government, including support to a number of third-party science organizations.

The three federal research granting agencies support the development of graduate students and post-doctoral fellows through two mechanisms: direct funding via scholarships and fellowships awarded to individual trainees and fellows, and indirect funding via stipends and salaries paid to trainees and fellows from research grants awarded to individual researchers and institutions. The Government recognizes that federal scholarships and fellowships play a critical role in the career progression of Canada's top talent, providing those who hold awards with increased financial security and independence along with greater control over their research direction. The Government carefully considers the balance of scholarship funding with regard to increasing the number of scholarship awards, the value of awards and the duration of awards.

To provide support to a greater number of graduate students and post-doctoral fellows, the Government provided through Budget 2019, \$114 million over five years with \$26.5 million per year ongoing, to the granting agencies to create 500 more master's level scholarship awards annually and 167 more three-year doctoral scholarship awards annually through the Canada Graduate Scholarship program. Budget 2019 also provided \$37.4 million over five years and \$8.6 million per year ongoing, to the federal granting agencies to expand parental leave coverage from six months to 12 months for students and postdoctoral fellows who receive granting agency funding. The investment has helped young researchers, especially women, better balance work obligations with family responsibilities, such as childcare.

The Government recognizes that despite this investment to increase the number of federal scholarships, many students continue to face financial challenges that can be a barrier to pursuing their degrees. To this end, the Government has invested in additional initiatives to support post-secondary students and make life more affordable. The Canada Student Financial Assistance Program (CSFA program), for example, plays a critical role in ensuring all Canadians have access to affordable and accessible post-secondary education. Working in

collaboration with provincial and territorial governments, the CSFA program delivers financial assistance through the Canada Student Grants and Canada Student Loans programs. As announced in the 2022 Fall Economic Statement, the Government permanently eliminated interest on all Canada Student Loans and Canada Apprentice Loans beginning April 1, 2023, supporting more than 1.2 million post-secondary graduates in Canada each year. Taken together, these investments support Canada's commitment to inclusive and equitable quality education and lifelong learning opportunities for all Canadians.

The Government further recognizes the importance of ensuring graduate students and post-doctoral fellows have access to experiential learning opportunities and support for career integration. Mitacs—a national, not-for-profit corporation dedicated to promoting high-quality research and innovation across Canada—has been an important partner in helping forge collaboration through its internship programs between the post-secondary and post-doctoral ecosystem to all sectors of the economy. Mitacs' work-integrated learning (WIL) programming focuses on placements in applied research and development, business strategy and entrepreneurial partnerships, as well as commercialization efforts in bringing discoveries to market. Mitacs' suite of international programming placements has also been a significant resource in facilitating the inbound and outbound mobility of students, helping support the Government's objectives to attract and retain diverse high-quality talent; drive international research and development connections; strengthen Canada's capacity for global economic activity; and position Canada as a global partner of choice. Government funding to Mitacs over the last ten years has supported close to 100,000 WIL opportunities, averaging more than 11,000 placements each year in the last five years alone. Through its various program streams, Mitacs supported a total of 21,431 WIL placements in 2022–2023 with federal funding, hosting 9,800 students in both the for-profit and not-for-profit sectors.

Looking forward, the Government of Canada remains committed to supporting a strong federal system that fosters new ideas, breakthroughs, and advancements, and is focused on cementing Canada's position as a global centre for research excellence and career support that will attract and retain talent for years to come. Canada's talent is a key strength and the Government is committed to ensuring continued support for students and fellows, to empower the great minds of tomorrow. In order to reinforce Canada's leadership position, our research support system must meet the needs of today's research and advanced research training, which is increasingly complex, collaborative, multi- and interdisciplinary, and international. To these ends, the Government recognizes the importance of continued evaluation of an investment in Canada's science and research ecosystem including the measures that support our talent. The Government welcomes the Advisory Panel on the Federal

Research Support System's report and is carefully reviewing the findings and recommendations, and taking them under consideration as it advances its efforts to support the research ecosystem and Canada's top talent.

Scholarship and Fellowship Program Design (Recommendations 3, 4, 5)

Equitable Access for Underrepresented Groups

The Government recognizes that a more equitable, diverse and inclusive Canadian research enterprise is essential to creating innovative and impactful research. Ensuring diverse cultural, social and regional perspectives helps improve the scientific impact of research, as highly diverse teams outperform in innovation, critical and creative thinking, productivity, and overall performance. The federal granting agencies are committed to ensuring that their assessment of excellence is inclusive of the full diversity of Canada's researchers and research institutions.

To deliver an equitable, accessible, and effective suite of scholarships and fellowships that helps support and prepare a diverse population of students and post-doctoral fellows for careers in research across all sectors of society, the Government, through the work of the Canada Research Coordinating Committee (CRCC), is developing a Tri-agency Training Strategy. The Strategy aims to be trainee-centric, evidence-based, and transparent, while communicating a shared vision among the tri-agencies and upholding the principles of equity, diversity and inclusion. Also, under the leadership of the CRCC, the federal granting agencies launched a comprehensive Tri-Agency Equity, Diversity and Inclusion (EDI) Action Plan with measures to increase equitable and inclusive access to granting agency funding. Through this Action Plan, the granting agencies are committed to ensuring that all policies, plans, programs and processes related to allocating granting agency support are equitable and inclusive, and mitigate bias against underrepresented groups, including selection processes.

The collection of self-identification data is a central piece of the agencies' commitment to EDI. As part of the EDI Action Plan, the agencies ask funding applicants and participants in the review process to provide information on various identity factors including, gender, sexual orientation, Indigenous identity, visible minority identity, and disability. This data facilitates monitoring progress on increasing EDI in the agencies' programs, recognizing and removing barriers, and designing new measures to achieve greater EDI in the research enterprise.

NSERC aims for the proportion of short-listed and funded applications from applicants who self-identify as members of underrepresented groups to be at least similar to the proportion of applications received from these groups. This rebalancing of proportions is only used for meritorious applications.

Underrepresented groups may include women and gender minorities, Indigenous peoples, persons with disabilities, members of visible minorities/racialized groups, and members of 2SLGBTQIA+ communities.

SSHRC continues to monitor the equity performance of its funding programs. In 2021, SSHRC created the Advisory Committee to Address Anti-Black Racism in Research and Research Training to advise the agency on ways to break down barriers, to ensure equitable access for Black scholars, and to amplify their voices and enhance their visibility in SSHRC research and research training programs. Following the committee's report in February 2023, SSHRC committed to developing an action plan based on the findings and recommendations. Further, in December 2022, SSHRC's inaugural Accessibility Plan was published. This plan aims to identify and remove barriers that hinder the participation of persons with disabilities in the research ecosystem, including access to SSHRC's research training funding opportunities.

CIHR is undertaking additional measures to enhance EDI in its funding system. This includes but is not limited to the launch of an expanded Tri-Agency Self-identification Questionnaire to collect information from applicants and peer review committee members on additional identity dimensions, and work with communities and partners to co-develop an anti-racism action plan and an accessibility and systemic ableism action plan to support underrepresented researchers in entering and thriving in the health research ecosystem.

In addition to the Tri-Agency EDI Action Plan, as Canada continues its work to promote EDI to tap into the country's full range of talent, it is critical to build new models for Indigenous research and research training informed by First Nations, Inuit, and Métis peoples. The federal granting agencies recognize that First Nations, Inuit and Métis are rights-holding as First Peoples of Canada, and initiatives to support Indigenous research and research training should be developed through distinctions-based approaches. The CRCC and the granting agencies partnered with Indigenous peoples to develop the strategic plan titled *Setting New Directions to Support Indigenous Research and Research Training in Canada 2019–2022*. The plan lays the groundwork to establish a national research program in partnership with Indigenous peoples to advance reconciliation, in response to Truth and Reconciliation Commission Call to Action 65. Further, in 2022, the granting agencies established an Indigenous Leadership Circle in Research to advise them on the implementation of the strategic plan and provide guidance on how to enhance support for Indigenous research and training.

In addition, CIHR is working hand-in-hand with Indigenous community partners to build a healthier future for First Nations, Inuit, and Métis Peoples. These efforts have achieved important strides in removing barriers to accessing agency funds,

while helping to increase Indigenous Health Research capacity in communities of all sizes, across the country. For instance, in 2020, following consultation with partners, CIHR expanded its funding eligibility criteria to include Indigenous non-governmental organizations with a research or knowledge translation mandate. Further, through the Network Environments for Indigenous Health Research (NEIHR) initiative, which represents an investment of more than \$100 million over 16 years, CIHR has funded the establishment of a network of centres across Canada focused on capacity development, research and knowledge mobilization driven by, and grounded in, Indigenous communities.

Through these and other actions, the granting agencies are taking concrete steps to address systemic barriers that limit the full participation of all talented individuals, and are working to create a culture where embedding EDI considerations into all aspects of research is second nature.

In alignment with the above commitments to advance EDI and ensure the fair review and awarding of all funding applications, the Government has also committed to providing targeted scholarship opportunities to support underrepresented groups. Since 2019–2020, Indspire has received \$70.1 million through the Supports for Student Learning Program to deliver scholarships, bursaries and other supports that help First Nations, Inuit and Métis students access and succeed in post-secondary education. This funding has enabled Indspire to support several thousand students each year, including more than 7,500 students in 2022–2023.

In addition, in September 2022, SSHRC and NSERC launched the Indigenous Scholars Awards and Supplements Pilot Initiative to provide financial support to Indigenous master's students in social science, humanities, natural science, and engineering programs. Through this funding, Indigenous students will receive a \$17,500 award as well as a \$5,000 supplement as part of the current Canada Graduate Scholarships – Master's program. At the doctoral level, educational institutions may also recommend applications from self-identified Indigenous student researchers to the doctoral awards competition beyond the institution's application quota. These additional awards to promising Indigenous students help address barriers to accessing higher education.

To help increase opportunities for Black student researchers in Canada, the Government, through Budget 2022, provided \$40.9 million over five years and \$9.7 million ongoing to the granting agencies to support targeted scholarships and fellowships. This funding will increase the diversity of Canada's research community and help address the disproportionate underfunding of Black researchers at all stages of their careers and lead to better science and new discoveries.

A diverse, inclusive, and equitable research community leads to the innovative and impactful research necessary to advance knowledge and understanding, and to respond to local, national and global challenges. The Government will continue its efforts to strengthen EDI in the research community and Canadian society.

Supporting Fair Regional Distribution

The Government also recognizes the importance of diverse regional perspectives. While a majority of graduate students are enrolled in universities within city centres, regional institutions remain a critical piece of the research enterprise. Post-secondary institutions located outside of major city centres, which are predominantly small and medium-sized institutions, play an important role in their communities. These institutions often have strong ties to the area—conducting research relevant to the needs of the community, making post-secondary studies more accessible to local students, and retaining talent in the local economy upon graduation.

Regarding scholarships and fellowships, the granting agencies' quota system is designed to ensure that promising talent from small institutions is not disadvantaged. As outlined in the Committee's Report, scholarships are awarded through the institutions where the students are enrolled. Financial data is used to determine the number of Canada Graduate Scholarship Masters (CGS-M) allocations for each eligible institution per agency. Each institution is allocated a minimum of one award. Similarly, for doctoral awards, including the Vanier CGS, institutions are provided a quota on the number of awards they can submit to the granting agencies. The minimum quota of three applications ensures that students from small institutions maintain access to scholarship opportunities. The use of financial data, including an institution's previous award and grant funding, serves as a proxy for an institution's research intensity and therefore, student capacity and ability to host graduate students and post-doctoral fellows, while the established minimum quotas ensure that smaller institutions are not disadvantaged by research output alone.

The granting agencies provide support to strengthen the research capacity of small and medium-scale institutions to conduct high-quality research and training. The tri-agency Research Support Fund, which assists with the institutional costs of maintaining a world-class research environment, uses a progressive funding formula that awards higher rates of funding to institutions that receive the least amount of money from the federal research granting agencies, in order to help smaller institutions build capacity. Further, the CFI's John R. Evans Leaders Fund ensures that small institutions in Canada have a fair and equitable chance at receiving support for research infrastructure, by allowing them to access dedicated additional funding through the Small Institution Fund, offering greater flexibility to address growth potential.

Federal research funders have also introduced various measures to better support research at small and medium-sized institutions, including those located outside of major cities, while maintaining a commitment to merit:

- NSERC's Discovery Development Grants program has awarded \$5.9 million since 2017 to promote and maintain a diversified base of high-quality research and provide a stimulating environment for research training in small universities across Canada.
- SSHRC's Insight Grants program offers two streams based on award sizes, with the smaller scale grants in principle allowing researchers from smaller institutions to compete successfully and to build research capacity within the institution.
- SSHRC's Institutional Grants (SIG) provide annual block grants to help institutions fund, through their own merit review processes, small-scale research and research-related activities. SIG awards are based on a progressive calculation weighted towards smaller institutions, and small institutions can also qualify for an additional supplement of up to \$500,000 per year.
- Under Canada's Strategy for Patient-Oriented Research (SPOR), CIHR has established partnerships with every province, as well as the Yukon and Northwest Territories, to create SPOR Support Units. These regionally based centres provide access to health data, apply knowledge generated through research to improve health care practices, provide training on conducting and using patient-oriented research, and engage patients as active partners throughout the research process. CIHR continues to work with partners to launch a SPOR Support Unit in Nunavut.
- Since 2000, the tri-agency CRC program has included a special allocation of Chairs to support research at smaller, regional universities. At present, there are 137 Chairs allocated to institutions that received one percent or less of total agency funding (over the three years prior to the year of the allocation).

Looking forward, the Government will continue to support diverse regional perspectives and the capacity of small and medium-scale institutions.

Expanding Eligibility to International Students

Building a talent pipeline requires not only training the best minds in Canada, but attracting those from around the world. The Government's significant investments in science and research over successive budgets have contributed to a strong research environment—one that has resulted in global recognition for our world-class research capacity and has succeeded in attracting top talent

internationally. As outlined in the committee's report, through the granting agencies, the Government provides notable funding opportunities to support top talent attraction, including the Vanier Canada Graduate Scholarship for Canadian and International Doctoral Students, and the Banting Postdoctoral Fellowship for Canadian and International postdocs. The CIHR Fellowship is also open to international applicants, providing increased opportunities to study at Canadian institutions. In addition, international students are eligible to receive financial support through indirect funding via grants.

International students who choose to study in Canada expose our students to new ideas and methodologies, stimulating research and innovation and contributing to our intercultural competencies. Some of these students remain in Canada upon graduating and eventually become permanent residents, contributing to Canada's labour market and becoming valued members of our communities, while others return home and act as ambassadors for the Canadian experience. The Government, recognizing the importance of supporting student exchange, administers a range of short-term scholarship programs, such as the Emerging Leaders of the Americas program, Study in Canada Scholarships and the Canada-ASEAN (Association of Southeast Asian Nations) Scholarships and Educational Exchanges for Development. These programs, which are managed by Global Affairs Canada and are open to international students at both the graduate and undergraduate level, enhance mobility and opportunity for international students while fostering collaboration and institutional partnerships.

Through mobility and international research collaboration, researchers, including graduate students and post-doctoral fellows, strengthen and develop new competencies and fuel connections which support jobs of the future in our increasingly interconnected global economy. Looking forward, the Government will continue to leverage Canada's position within the international research community and foster global collaborations to address current and emerging challenges facing Canadians.

Ensuring Student Representation (Recommendation 6)

The Government values the opinions and feedback of students and postdoctoral fellows to inform the development and evolution of research programs and policies. The Government agrees that engagement with graduate students and post-doctoral fellows is critical to understanding their perspectives and improving the research enterprise.

In Canada, appointments to federal public organizations such as the granting agencies are made by the Governor in Council, meaning, the Governor General acting on the advice of the King's Privy Council for Canada as represented by Cabinet. Appointments are recommended to Cabinet by federal ministers.

Each of the three granting agencies is governed by a Governing Council of up to 18–19 members. Members of the Governing Councils are appointed by the Governor in Council, and are drawn from the academic, public, and private sectors. The roles of the Governing Councils include advising the agency presidents on strategy, risk management, performance management, the broad allocation of resources, and stakeholder relations, to ensure that agency priorities and programs support high-quality research, training and knowledge mobilization. In the past, Council membership has included Vice-Presidents, Academic and Deans of Graduate Studies from universities across Canada who bring their expert knowledge of student issues to Council discussions. The enabling Acts of the three agencies do not prevent the Governor in Council from appointing graduate students or post-doctoral fellows to the Councils. For instance, in 2019, a post-doctoral fellow was appointed to the Governing Council of CIHR.

Outside of the Governing Councils, there are also other mechanisms for members of the research community to provide formal advice to the agencies. There are opportunities for students and postdoctoral fellows to provide input which informs the deliberations of each Council. For instance, SSHRC has a sub-committee of Council, the Programs Committee, in which graduate students and postdoctoral fellows are eligible to nominate themselves for membership. NSERC has long had students and fellows on its Standing Committee on Discovery Research, while CIHR has had students appointed to the Institute Advisory Boards that advise each of its thirteen virtual Institutes on Institute-specific issues and initiatives.

The granting agencies have taken other steps to ensure student and fellow engagement. For example, CIHR's Institute of Human Development, Child and Youth Health has launched a youth advisory council to bring a youth voice directly into conversations about priority development, policies and issues that impact Canadian communities from coast to coast to coast. Further, the agencies also maintain an ongoing dialogue with various student groups and associations. Tri-agency regional visits take place every fall with Scholarship Liaison Officers, and the Deans of Graduate Studies are also invited to attend. SSHRC and NSERC also maintain regular dialogue with the Canadian Association of Graduate Studies (CAGS) and the Canadian Association of Postdoctoral Scholars (CAPS).

More recently, graduate students have been engaged in the tri-agency evaluation of talent programs at multiple levels and stages. Two national graduate student organizations were consulted during the design phase and their advice helped set priority focus areas and questions. Throughout the evaluation, 3 graduate students have been serving as members of the evaluation team. These students have been active at all stages, including the drafting of findings and conclusions.

In addition, 35 graduate students participated in in-depth case studies, while over 75 graduate students provided feedback on the design of a student survey, which engaged more than 17,000 students who provided input.

Graduate students were also a key focus of engagement activities undertaken by the Advisory Panel on the Federal Research Support System in Fall 2022. The work of the Panel included a specific session on talent, which involved consultations with the Canadian Alliance of Student Associations (CASA), the Quebec Student Union, and representatives from Support Our Science. CASA and the Quebec Student Union also provided written submissions to the Panel. In addition, 57 students provided input through an online questionnaire launched by the Panel to more broadly engage Canadians.

Looking forward, the Government remains committed to engaging with graduate students and post-doctoral fellows to ensure that Canada's research enterprise is aligned with the needs of the research community. The perspectives shared by graduate students and post-doctoral fellows across Canada will be considered as the Government continues to advance its efforts to support the research ecosystem.

Conclusion

Canada's talented and determined researchers drive the creation of new knowledge that improves our well-being as well as our economic competitiveness and prosperity. Moreover, their research and innovations are crucial to helping us answer environmental, social and health challenges facing our country and the world such as climate change, food security, and pandemic preparedness. In short, research and innovation are critical to maintaining and improving every aspect of our lives.

Our graduate students and post-doctoral fellows are Canada's emerging research leaders and play a critical role in the research enterprise, producing knowledge and discoveries throughout their studies that help drive Canada's innovation. The Government of Canada remains committed to supporting a strong federal research system that nurtures our top talent and fosters new ideas, breakthroughs, and advancements. To these ends, the Government recognizes the importance of continued evaluation of an investment in Canada's science and research ecosystem to ensure success for researchers now and in the future. It is our collective responsibility to ensure that Canada remains at the forefront of the global competition for top talent.

The Government reiterates its thanks to members of the Committee for their dedication to undertaking this review and for their commitment to Canada's science and research community. The Government looks forward to engaging

with the Committee, the research community, graduate students and post-doctoral fellows, and all Canadians on ways to leverage science and research to foster a prosperous and inclusive economy and society. Our coordinated efforts today will be a critical factor in strengthening the pipeline of new technologies and talent of tomorrow.

Sincerely,

A handwritten signature in black ink, appearing to read 'F. Champagne', with a stylized flourish at the end.

The Honourable François-Philippe Champagne, P.C., M.P.