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Brief written submission by the Canadian Association of Postdoctoral Scholars (CAPS/ACPP) to the House of Commons Science and Research Committee study on the Government of Canada's Graduate Scholarship and Post-doctoral Fellowship Programs

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Are we on the verge of losing talent in Canada?

Who are Postdocs? What do they do?

Postdocs are highly qualified and skilled professionals who come to Canada to enhance their skill set further in their respective research fields following a doctoral degree. So, they are **NOT STUDENTS** anymore as they would have spent 3-6 years on average to obtain a graduate degree (Ph.D.) and would like to pursue a postdoctoral career for about 5 years on average. These years may increase depending on the area of their research and specialty as recently it takes about 8-10 years, around 2-3 different postdoctoral experiences, to acquire the skillset needed for an assistant professor position in academia. According to our latest survey there are about **10000 postdocs** in Canada are working across various STEM and Humanities fields. About **45%** are domestic, and **38%** are international postdocs on work permits. The postdocs are mainly around 30-34 years old; about **62%** are married, and **39%** have dependents. There are about **48%** of female and **49%** male postdocs. They are highly competent individuals who help formulate the research question, execute complicated and perform skill-rich experiments followed by analyzing the research outcome. Their role not only stops in supporting the principal investigator (PI) of the lab by generating data for high-impact peer-reviewed journals but also helps in the preliminary data collection of the tri-council

grants for the PI and train and mentor the junior research members in the team. **They form the strong backbone of any research lab.**

How is their research supported?

In order to carry on research, the postdocs are primarily funded by a PI's tri-council research grant. About **50%** of the postdocs are funded by a PIs grant. **The major tri-council grants such as CIHR, NSERC and SSHRC fund about 4%, 11% and 2% of postdocs. Other non-profits funding agency grants such as MITACS fund 7% of the postdocs. Federal agency grants significantly fund research in academic institutions.** Any hindrance to this pathway badly affects the financial support available for research, resulting in a major setback to the innovation sector. **Postdocs and grad students are the key players in the research institution. So, any obstacle to the funding pathway badly impacts the number of postdocs available for performing research.**

What are the majors concerns with the current funding system?

Each tri-council agency contributes to the research in Canada - CIHR, NSERC, and SSHRC support \$1.4B, \$1.3B, and \$1.2B. **A total of about 450 awards are distributed to postdocs across the country by CIHR, NSERC, and SSHRC. Also, these fellowships are very competitive and usually are limited in their funding duration to about 2-3 years. Most of the funding grants have a cap on the eligibility status of the postdocs.** It restricts them from applying for those grants beyond **5 years** from the completion of their Ph.D. This poses a great deal of trouble for postdocs who are in a position to continue their postdoctoral career for field specific reasons after the 5-year time point from their Ph.D. degree conferral date. **In such situations, it makes them ineligible for most grants by pushing them to rely solely on the PI's grant. It is also to be noted that the values set by the tri-council agency for the postdoc pay act as a reference scale for PI's and universities. As the funding values for the postdoctoral fellowships have stayed the same for the past 20 years, most PIs and universities justify the present pay scale, which is unacceptable.** The postdocs also do not follow a specific term pattern. So, an individual can start their

postdoc position at any given time of the year. And most of these fellowships are just available once a year. If a postdoc misses the first round due to their arrival date, they then wait for at least another 8-10 months to be able to submit a new grant. These situations strongly influence and cost them a lot in their postdoc journey. The current funding amounts are not indexed for Canada's increased cost of living. The dollar value of the existing postdoctoral fellowship funding from the Tri-council agencies was established 20 years ago and has not been changed since to match the inflation.

Research and Innovation sector in Canada compared to other countries?

Postdocs are one of the vital pillars of the Research and Innovation sector. Canada has invested about 43.22B in R&D, and higher education institutions contribute a significant \$16.32B. Canada's share of the global output relative to its GDP is about 60% under the adjusted global average. Canada only contributes about \$87B to the innovation sector, which is very small compared to the USA \$1.6T, China \$1.5T, EU28 (excluding Germany) \$1.1T, Japan \$602B, and Germany \$578B. Insufficient budget allocation by the federal government has resulted in reduced financial support available for the innovation sector thereby causing Canada to lose out in the global front. Canada must invest \$57B in the innovation sector to compete with the global market.

How does the postdoc funding look across the globe?

According to the latest survey conducted by the Canadian Association of Postdoctoral Scholars, the median salary reported by postdocs across Canada was \$52,500 (with a funding range of \$35,000 to 75,000 and a projected average of \$52,622), with a quarter of postdocs earning below \$45,000 a year before tax. A postdoc is not eligible for any overtime pay. Generally, they won't be able to take up additional teaching or other administrative jobs in the university as the immigration clause and university policies restrict them from doing that to compensate for their pay. Even though the official working hours for a postdoc mentioned in the university employment contract is 40 hours per week but, their

research demands about 60 hours of work per week for which they are not compensated by any means. **To make the situation worse, the postdoc salaries in Canada are not even matched to inflation and are no longer competitive compared to other countries such as Australia, the United States, and Europe (Switzerland and Germany). The starting pay of postdocs based on the national funding agencies in Australia is AUD 110,417 (97,103 CAD), in the United States is USD 56,484 (74,483CAD), in Switzerland is CHF 86'100 (131,991 CAD) and in Germany is EUR 61,687 (90,248 CAD). This value increases every year in correlation with experience. Also, there are a couple of points to be noted, as most of the international postdoctoral positions offer health, pension, nursing, and unemployment insurance.** The postdocs are usually considered as an employee of the university in most countries except Canada. **According to our report, only 52% of postdocs have extended health insurance in Canada, and about 18% of them do not have access to provincial health care.**

How does the low pay impact their quality of life?

The cost of living has steadily increased over the years, and the unchanged value of the postdoctoral fellowships makes it very challenging for the postdocs even to **meet the primary responsibilities of life.** They struggle to afford healthy food, quality housing, healthy work-life balance, peaceful vacation, and the finest healthcare, including maternal and paternal leave. This is further complicated for a postdoc who is the sole breadwinner of the family with kids. **In most Canadian universities, a postdoc loses employee status by winning a prestigious tri-council grant.** This puts sudden unexpected pressure on the postdocs to meet the family's healthcare demands. Our recent report, when compared to our previous year's survey, suggests that the benefits received by postdocs has increased on the whole, and this has been made possible by the unionization of the postdoctoral community across the different institution in Canada. Unionization is not a viable solution for postdocs in some smaller universities nationwide, putting them in a vulnerable situation. **Instead, the federal agency grant values should be increased to support quality healthcare benefits, enhanced professional development, and reasonable**

work-life balance. In recent years skilled professionals in the science field need to spend extra years as postdocs before transitioning into independent principal investigator positions. This means they need extended support than what is already in place. **This is only possible by increasing the numbers and the values of available grants by the tri-council agencies that need to be financially aided by the federal government investing more money in the Research and Innovation sector.**

Brain Drain?

As the current postdoctoral fellowship funding value is not competitive, many postdocs, including fresh postdocs after their graduate school, are choosing to leave Canada to find well-funded positions abroad. The government's negligence in providing quality financial support for the future talents of Canada is causing an inequitable environment. **The current scenario favors the wealthy and the financially privileged individual to stay in the system. In contrast, it must foster an inclusive environment for individuals from different socio-economic backgrounds.** This situation is **UNACCEPTABLE**, and we need a **FIX** for it immediately before it is too late.

In order to prevent brain drain, the federal government needs to massively increase its funding for the Research and Innovation sector. It needs to provide competitive salaries along with other added benefits such as quality healthcare, increased professional development support, unemployment, and retirement benefits. The value should also be increased yearly to complement their experience, and it needs to be revised annually to match the cost of living.

Since the federal budget of 2010, all the postdoctoral fellowships are taxable, which results in low pay. Unfortunately, this decision has narrowed the salary gap between graduate students (Ph.D's) and postdocs, compelling young talents to abandon academic research careers. The fellowship values for expensive cities such as Vancouver and Toronto must be matched. They should not be compared and justified to some of Canada's low-cost-of-living cities. This approach seems

equitable, and by doing so, the postdocs living in expensive cities can live a better quality of life.

Need of the hour

Recently, we shared a poll amongst the postdocs across Canada asking for two important questions:

1. What do you think the postdoc's salaries should be?

We had 352 votes showing that 41.5% of the postdocs wanted \$70,000-\$79,000 salary whereas 36.9% asked for less than 80,000 salary.

2. Are you satisfied with your postdoctoral health benefits?

About 92.9% of them were not happy with their current benefits.

As highlighted above, we would like to draw the committee's attention to the critical status of postdocs and research in Canada. **We propose the following:**

1. The postdoctoral fellowship values and numbers should be increased and reflect the existing taxation status and debt burden of researchers at the postdoctoral stage of their career.

2. We request an annual increase in the value of the fellowships to keep up with inflation going forward.

3. To make the research sector more engaging and enticing, the federal government should fund extra dollars to the tri-council agencies for them to accommodate healthcare support for postdocs into their funding structure to foster a healthy and happy postdoctoral scholars population in Canada for accomplishing world-class research.

The Canadian Association of Postdoctoral Scholars/Association Canadienne des Postdoctorantes et Postdoctorants (CAPS/ACPP) – We are a volunteer-run, non-profit and professional association. We advocate for Postdoctoral Scholars across Canada (and for Canadian postdocs working abroad). CAPS/ACPP strongly believes in the value of advocacy work for Canadian postdocs. The mandate of CAPS/ACPP is to improve the lives, training and work experience of all postdocs across the country.

