



## #SPECafe | Time Flies When You're Having Funds

The early career perspective on scholarships and fellowships

## Discussion Overview

For our SPE café debut, we will discuss basic science funding in Canada, and more specifically the Naylor report's recommendations.

Towards this goal, we have provided you on page 2-3 with an introduction to the current funding situation in Canada, highlights the Naylor report recommendations, and a brief overview advocacy strategies. We additionally provide you with additional resources on this topic on page 4.

### **Our focus for the discussion surrounds the following questions:**

1. What are our priorities on science policy funding?
  - a. How are students and postdocs affected by the current funding system in Canada?
  - b. Of the recommendations made in the Naylor report, which are the most important for students and post-docs?
2. Are there other recommendations for improving the funding situation for students and postdocs which are not included in the Naylor report?
3. What strategies can be used to advocate for these positions?
  - a. What steps can SPE take to make sure students are represented in science funding discussions?
  - b. What are strategies that the SPE can pursue to advocate for policy change?

## 1.0 Introduction to Naylor Report

The Advisory Panel on Federal Support for Fundamental Science was appointed in June 2016 with a mandate to review the federal system of support for the Canadian extramural research ecosystem: the three granting councils—the Natural Sciences and Engineering Research Council (NSERC), the Canadian Institutes of Health Research (CIHR), and the Social Sciences and Humanities Research Council (SSHRC)—as well as the federal infrastructure agency, the Canada Foundation for Innovation (CFI). The focus of the fundamental science review, also called the Naylor report was on programs supporting knowledge generation. This review found that the current Canadian funding system:

- Canadian gross domestic expenditure on R&D from all sources relative to GDP (GERD intensity) has been declining slowly over the last 15 years, as contrasted with our G7 peers and key east Asian nations.
- Canada ranks well globally in higher education expenditures on research and development as a percentage of GDP, but funding from federal government sources accounts for less than 25 per cent of that total.
- Institutions now underwrite 50 per cent of R&D costs with adverse effects on both research and education.
- Coordination and collaboration among the four agencies is suboptimal.
- Early career researchers are struggling in some disciplines.
- Levels of funding and numbers of awards for students and postdoctoral fellows have not kept pace, with inflation, peer nations, or the size of the applicant pools.
- Production of publications in most fields of research in Canada grew more slowly than the world average in 2003–2014.
- Canada’s federal research ecosystem is weakly coordinated and inconsistently evaluated.

## 2.0 Recommendations

In order to address the current shortfalls in the Canadian research funding system, we outline highlights of the Naylor's report recommendations:.

- Create a new National Advisory Council on Research and Innovation (NACRI), to coordinate and consistently evaluate Canada's federal research ecosystem.
- The Government of Canada should direct the new Four Agency Coordinating Board to develop and harmonize funding strategies across the agencies.
- Achieve better equity and diversity outcomes in the allocation of research funding.
- Provide long-term support for Indigenous research, to enhance research and training by and with Indigenous researchers and communities.
- Increase its investment in independent investigator-led research to redress the differential investments favouring priority-driven research.
- Strategies to support international research collaborations.
- Strategies to encourage, facilitate, evaluate, and support multidisciplinary research.
- Arrive at a joint mechanism to ensure that funds and rapid review mechanisms are available for response to fast-breaking issues.
- Increase the recruitment of top-flight international graduate students and postdoctoral fellows, to ensure that more domestic students and trainees have opportunities to learn from international exposure to leading scientists and scholars.

### 3.0 Advocacy

- Scientists are trained for “internal advocacy” (eg writing grants and giving presentation to peers) whereas “external advocacy” towards government requires different skills.
  - o Science is traditionally reporting data and interpreting, whereas advocacy is advising and recommending.
  - o A scientist advocating about an issue can risk being perceived as biased, potentially reducing credibility.

**STEPS TO SUCCESSFUL ADVOCACY**

1. Understand the issue – research and how citizens feel.
2. Identify and recruit allies - analyze “power” of ally: members, money, credibility, etc.
3. Recognize opponents and their tactics; develop strategy to respond.
4. Develop a plan: SMART goals, strategy, and tactics (what, who, when, how).

- How to advocate

Group	Group/Individual	Individual
Host policy seminars or webinars covering current policy issues	1. Write letters to your MP, invite MPs to visit your research institution, and attend town halls/events.	Join an advocacy group
Provide resources to individuals (eg for writing to MP)	2. Use social media 3. Write letters-to-the-editors and opinion pieces 4. Community engagement: volunteer in science outreach, host science cafes to engage non-scientists with university scientists, share cool images of science with interesting captions	

## Additional Resources

### ***Resources advocating for the Naylor Report***

- o Evidence for Democracy: letter writing to MP
- o Association of Canadian Early Career Health Researchers: meeting your MP
- o Canadian Society for Molecular Bioscience: write letters, meet MP, social media #NextGenCanScience

### ***SPE Resources on Science Funding***

- A copy of the Executive summary of the Naylor Report, which has been highlighted to focus on funding and policy changes which affect students. A full copy of the report and executive summary can be found at <http://www.sciencereview.ca>.
- The pre-budget consultation submission put together by the SPE Executive, which broadly highlights our position on the Naylor report and the current status of Canadian science funding.
- A brief written by the SPE which focuses on the role of STEM higher education in Canada's economy.

Documents found here: <https://drive.google.com/open?id=0B2bq5vtwli4Sc2UtMFpkT3l0R28>

### ***General Advocacy Links***

<https://www.aaas.org/page/srhrl-past-projects-workshop-advocacy-science>

<http://www.sciencemag.org/careers/2017/02/what-early-career-researchers-can-do-advocate-science>

<https://evidencefordemocracy.ca/en>

<http://www.acechr.ca/>

<https://www.csmb-scbm.ca/advocacy.aspx>

<http://ctb.ku.edu/en/table-of-contents/advocacy/advocacy-principles/overview/main>