

## **Objectives**

The overall aim of this project is to investigate how to optimize peer review of funding applications at CIHR.

Although CIHR has now effectively transitioned to virtual peer review for the Project Grant scheme, this still requires considerable reviewer and panelist time, and it is unclear whether that time is needed or could possibly be allocated to additional reviews that may improve overall reliability of applications.

## **Background**

The prior work most similar was a 2007 study of CIHR fellowship applications that estimated the impact of committee discussions [1] and found no evidence that discussions improved fairness.

## **Expected outcomes**

## **Training and mentoring**

## **Knowledge mobilization**

a brief literature review (if applicable), training and mentoring plans, and planned knowledge mobilization The Canadian Institutes for Health Research provides X% of funding for health research in Canada (cite). Determinations of priorities for research funds comes from both strategic investments as well as a process of competitive proposals. Determining which proposals are ultimately selected for funding depends chiefly on the process of review of proposals by committees of peers, charged with identifying the most promising ideas for research.

From CIHR: > The Project Grant program is open to applicants in all areas of health research that are aligned with the CIHR mandate. It is designed to capture ideas with the greatest potential for important advances in fundamental or applied health-related knowledge, health care, health systems, and/or health outcomes, by supporting projects of research conducted by individual researchers or groups of researchers in all areas of health. The best ideas may stem from new, incremental, innovative, and/or high-risk lines of inquiry or knowledge translation approaches.

Project Grant applications follow a committee-based peer review process. This process involves the evaluation of applications by a group of reviewers, who have the required experience and expertise to assess the quality and potential impact of the proposed research and research related activities, within the context of the program's objectives. These reviewers are grouped into Peer Review Committees based on their expertise and the topics of applications submitted to these committees.

Although the process of peer review for funding CIHR Project Scheme applications is transparent, there remain important questions regarding whether the current procedures are optimal with respect. In practice, each application is only read and evaluated by 3 committee members assigned to each application. These reviews are detailed and the reviewers are asked to judge

It is an open question as to how non-reviewing committee members typically assign their scores and ultimately evaluate the overall score for each application. It may be that the committee members effectively adopt the consensus score that is agreed to by the 3 reviewers after discussion. However, all committee members (including each of the reviewers) may assign their final score within a range of +/- 0.5 from the consensus score.

## **Applicant Characteristics**

Several studies have shown evidence of a roughly 5% funding disadvantage for female investigators in CIHR competitions [2]–[4].

## **Bibliography**

- [1] M. Obrecht, K. Tibelius, and G. D'Aloisio, “Examining the Value Added by Committee Discussion in the Review of Applications for Research Awards,” *Research Evaluation*, vol. 16, no. 2, pp. 79–91, Jun. 2007, doi: 10.3152/095820207X223785.
- [2] R. Tamblyn, N. Girard, C. J. Qian, and J. Hanley, “Assessment of Potential Bias in Research Grant Peer Review in Canada,” *Canadian Medical Association Journal*, vol. 190, no. 16, p. E489–E499, Apr. 2018, doi: 10.1503/cmaj.170901.
- [3] H. O. Witteman, M. Hendricks, S. Straus, and C. Tannenbaum, “Are Gender Gaps Due to Evaluations of the Applicant or the Science? A Natural Experiment at a National Funding Agency,” *The Lancet*, vol. 393, no. 10171, pp. 531–540, Feb. 2019, doi: 10.1016/S0140-6736(18)32611-4.
- [4] K. E. A. Burns, S. E. Straus, K. Liu, L. Rizvi, and G. Guyatt, “Gender Differences in Grant and Personnel Award Funding Rates at the Canadian Institutes of Health Research Based on Research Content Area: A Retrospective Analysis,” *PLOS Medicine*, vol. 16, no. 10, p. e1002935, Oct. 2019, doi: 10.1371/journal.pmed.1002935.