



Open Access Guide for Innovators

Grand Challenges Canada is committed to ensuring that the results, publications and data arising from Grand Challenges Canada-funded research are shared as broadly and promptly as possible, in order to spur further innovation and to optimize prospects for the translation of knowledge into solutions that save and improve the lives of people in low- and middle-income countries. To that end, Grand Challenges Canada innovators are required to comply with open access principles enumerated in two key policies – Grand Challenges Canada’s **Global Access Policy** and Grand Challenges Canada’s **Data Access Policy** – which are available at www.grandchallenges.ca/funding-opportunities/resources/.

The purpose of this document is to outline Grand Challenges Canada’s open access requirements, and to provide guidance to innovators on how to meet these requirements in the context of their Grand Challenges Canada-funded projects.

Of note to innovators that have previously worked with Grand Challenges Canada is that Grand Challenges Canada has recently revised both its Global Access Policy and its Data Access Policy, in part to ensure consistency with the highest open access standards and practices within the global health research funding community. **Appendix 1** provides a chart outlining key changes in these Grand Challenges Canada policies with respect to open access. The revised policies apply to all new Grand Challenges Canada projects beginning July 2016.

Core Open Access Requirements

The following four elements constitute the core requirements of Grand Challenges Canada’s approach to open access:

- 1. Dissemination within One Year of Project Completion:** Grand Challenges Canada expects its innovators to make available and openly disseminate the key findings and data from their Grand Challenges Canada-funded projects – whether positive, neutral, or negative – as quickly and broadly as possible. The permissible timeframe for dissemination is typically within one year of project completion, but is subject to extension by Grand Challenges Canada in appropriate circumstances; for example, in the context of good-faith efforts to publish, obtain intellectual property registrations or commercially implement innovations.
- 2. Open Access Publication:** Grand Challenges Canada fully supports journal publication as an important means for innovators to satisfy the above-noted dissemination requirement. However, to ensure that the broadest possible community of researchers can use and build on the knowledge generated through Grand Challenges Canada-funded projects in order to address global health challenges, all

published journal articles must be openly accessible under a Creative Commons Attribution (CC BY) or equivalent license immediately upon publication, without an embargo period.

3. **Open Access to Underlying Datasets:** Innovators must also deposit the underlying **datasets** supporting their findings into appropriate open access repositories or, if unavailable, suitable alternatives that ensure ease of discovery and sustainability of long-term access.
4. **Reporting:** In order to foster accountability and to facilitate project-specific and program-wide analysis of Grand Challenges Canada-funded research, innovators are required to provide periodic reports to Grand Challenges Canada on dissemination of findings, publications and depositing of datasets into repositories, including after project completion.

Guidance for Innovators

This section provides Grand Challenges Canada innovators with specific guidance on how to achieve open dissemination of their project findings and data, in compliance with Grand Challenges Canada's requirements, in particular through open access publishing, deposition of underlying datasets, and Grand Challenges Canada's *F1000Research* gateway option. Templates for reporting on open access will be provided to innovators towards the end of their Grand Challenges Canada projects.

1. OPEN ACCESS PUBLISHING

What is Open Access Publishing?

Open access publishing means making published scientific information – whether it is in the form of peer-reviewed articles, conference proceedings, monographs, theses, working papers or otherwise – available online, free of charge, in a manner that enables open use and exploitation by researchers and society at large. There are two main routes to make published scientific information available on an open access basis: self-archiving and open access journal publication.

- **Self-archiving**¹ occurs when an author publishes research findings in a peer-reviewed journal and, following a journal-imposed embargo period (often six months to one year), deposits an electronic copy of the article or final manuscript into an openly accessible online repository (either an institutional or a subject matter-based repository).
- **Open access journal publication**² occurs when the publishing journal itself makes published scientific information immediately available online for free. Articles may be published in pure open access journals, such as PLoS, or in hybrid open access journals,

¹ Innovators may commonly see self-archiving referred to as the “Green Option”

² Innovators may commonly see open access journal publication referred to as the “Gold Option”

which are paid subscription journals that provide authors with an option to publish on an open access basis, typically for a fee called an Article Processing Charge (APC).

Either of these two routes is acceptable, so long as the published scientific information is openly available immediately upon publication. Please note, however, that **the embargo period typically associated with self-archiving does not meet Grand Challenges Canada’s open access requirements.**

How “Open” Must the Published Work Be?

Grand Challenges Canada requires that published works arising from Grand Challenges Canada-funded projects be made openly available to the public under the terms of a particular type of copyright license called a **Creative Commons Attribution (CC BY) license** (or under a license with equivalent terms). Creative Commons (CC) offers several types of public copyright licenses that enable the free distribution of otherwise copyrighted works, each type differing in the scope of permitted uses; for example, differences with respect to reuse for **derivative works**³, use for **commercial purposes** and/or requirements for **author attribution**.

The **CC BY** license required by Grand Challenges Canada permits unrestricted reuse (including to make derivative works), distribution and reproduction in any medium, including for commercial purposes, provided the original work is **properly attributed**.

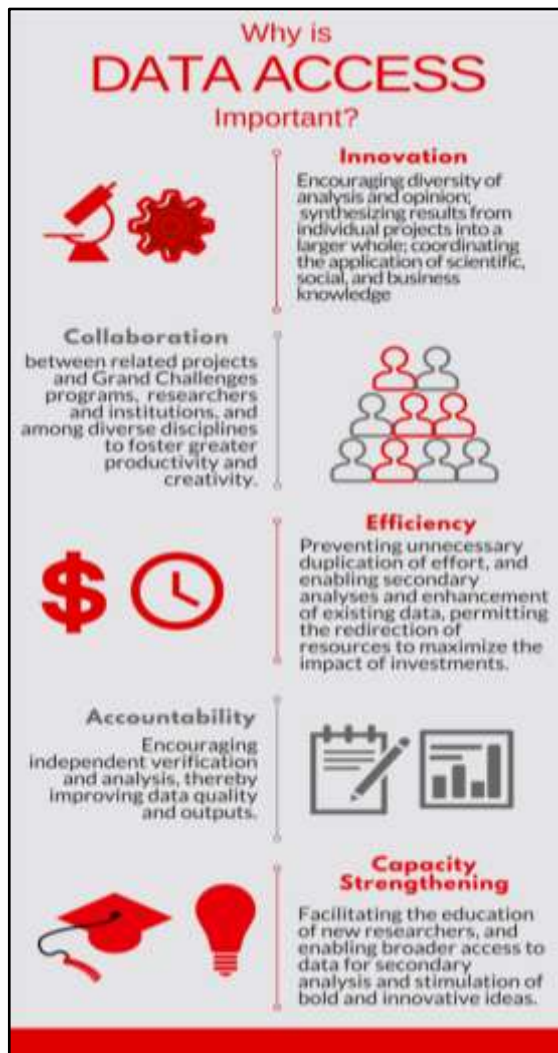
Table 1 below compares the terms of the CC BY license required by Grand Challenges Canada to other commonly used CC licenses.

Table 1. Comparison of CC License Terms

License	Who Gets Reuse Rights	Redistribute Article: Print, Hand-Out Display	Reuse or Modify Tables, Images or Extracts (Derivative Works)	Reuse For Commercial Purposes
CC BY Required by Grand Challenges Canada	Anyone	Yes	Yes	Yes
CC BY-NC-ND	Anyone, except for commercial purposes	Yes	No	No
CC BY-NC	Anyone, except for commercial purposes	Yes	Yes	No

Further information about CC licenses is available at <https://creativecommons.org/licenses/>.

³ A “derivative work” is a new, original work that incorporates elements of one or more prior copyrighted works; e.g., images, tables, extracts, etc.



Where can I Find a Suitable Open Access Journal?

Innovators should consult the Directory of Open Access Journals (doaj.org) to find a suitable journal that complies with Grand Challenges Canada's publication requirements. A search for a particular journal in the directory will return a journal name with the Creative Commons license(s) available for that journal listed beside it.

2. DEPOSITION OF UNDERLYING DATASETS

What is Grand Challenges Canada's Data Access Requirement?

In addition to open dissemination of research findings (such as through open access publishing), Grand Challenges Canada requires that the datasets underlying those findings be deposited into an **open access repository**, which is an online archive that enables open, free-of-charge access by other researchers and the general public. Data dissemination through repository deposition must typically be achieved within one year of project completion (subject to possible extension, as discussed above), but must be done immediately if applicable project results are published earlier. Grand Challenges Canada requires open data access to promote innovation, collaboration, efficiency, accountability and capacity strengthening. (See accompanying box on this page.)

What Repositories are Suitable for Project Data?

Innovators may deposit their data in established repositories that are recognized within their respective disciplines, so long as those repositories make data available under terms that meet Grand Challenges Canada's requirements. Specifically, Grand Challenges Canada innovators should examine the policies of contemplated repositories to ensure that they are not more restrictive than the **CC BY** license discussed above, and that they foster immediate access to deposited data.

Grand Challenges Canada innovators may consult the Registry of Research Data Repositories (www.re3data.org/) to identify suitable repositories for their project data. The registry has an icon system that indicates the relevant properties of a data repository, such as whether it is open access, as well as the Creative Commons license(s) available. Innovators who are unable to identify suitable repositories for their data should contact their Grand Challenges Canada Project Coordinator to discuss alternatives for data access.

3. COSTS AND BUDGETING FOR OPEN ACCESS

Does Grand Challenges Canada Pay for Open Access Costs?

Innovators who anticipate publishing results and/or disseminating data **prior to completion of their Grand Challenges Canada-funded projects** should indicate the anticipated costs associated with open access publication (e.g., Article Processing Charges) and depositing of project data in suitable repositories in their proposed project budgets. These budget categories will be subject to review and approval for inclusion in each innovator's final project budget. Where publication and/or deposition of data will occur **after Grand Challenges Canada project completion**, open access costs cannot be included in the Grand Challenges Canada project budget, but Grand Challenges Canada may be able to provide project supplements to support associated costs, depending on availability of funds at that time. Innovators should contact their Grand Challenges Canada Project Coordinator for such post-project requests, which will be considered on a case-by-case basis.

What if Grand Challenges Canada Funds are not Available for Open Access Costs?

Innovators are responsible for complying with Grand Challenges Canada's open access requirements whether or not Grand Challenges Canada funds are ultimately made available to support associated costs. They may do so using other sources of funds for their projects, or through low-cost or free alternatives. Innovators now also have the option to satisfy Grand Challenges Canada's open access requirements by publishing via Grand Challenges Canada's *F1000Research* gateway, the costs of which are covered directly by Grand Challenges Canada. Further information is provided below.

4. Grand Challenges Canada's *F1000Research* Gateway Option

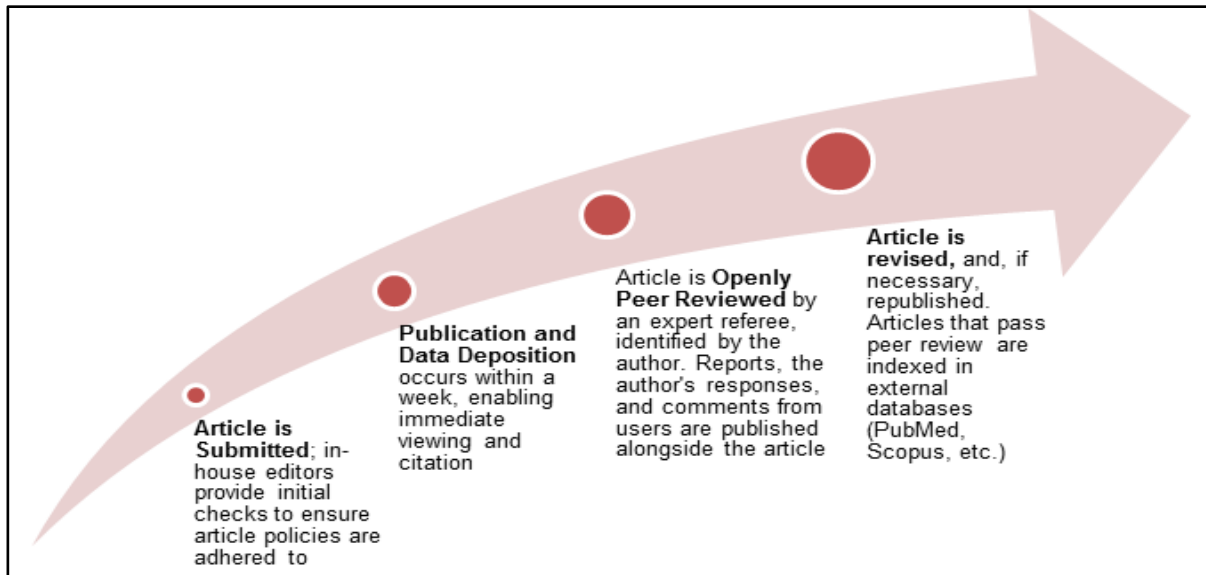
Overview

Grand Challenges Canada has established a **Gateway** via *F1000Research* (www.f1000research.com) to assist innovators in achieving open access publication and deposition of underlying datasets at no cost. *F1000Research* is an open access publishing platform offering immediate online publication of articles, posters, slides and documents under a CC BY license. All articles benefit from transparent peer review and the inclusion of all source data. While the *F1000Research* gateway is available to all Grand Challenges Canada innovators, it may be particularly suitable where funding from Grand Challenges Canada or other sources is not available to cover journal APCs, or where innovators are unable to identify appropriate open access journals or repositories for their work.

F1000Research Publication Process

1. Each submission is first reviewed by the *F1000* editorial team to ensure that the subject matter is appropriate, meets *F1000Research*'s editorial, ethical and data policies, and is intelligible.
2. *F1000Research* uses a post-publication peer review system: after the first review submissions are immediately published, peer review is undertaken by expert referees invited on the author's behalf. Authors are asked to suggest five unbiased referees, who may be from the *F1000Research* faculty list or others who meet the relevant criteria.
3. Articles that satisfy the peer review process are indexed in PubMed, Scopus and other bibliographies.

Figure 1. F1000Research Publication Process



Article and Underlying Data Guidelines

F1000Research publishes original works in the life sciences that meet applicable *F1000Research* policies. Common types of articles published on *F1000Research* include: Research Articles, Method Articles, Study Protocols and Reviews.

All primary research articles should be accompanied by the submission of underlying data, together with details of any software used to process results. *F1000Research* requires that, where possible, all data is hosted by a stable and recognized open repository, which may be an **external repository** (see Registry of Research Data Repositories) or ***F1000Research*** itself. See *F1000Research's* Data Guidelines for more details on data preparation, hosting and repositories.

Other Resources for Innovators

The following additional resources are useful tools to assist Grand Challenges Canada innovators in meeting their open access requirements:

- Romeo is a searchable website providing information on publishers' copyright policies.
- Academia.edu is a U.S.-based platform for academic researchers to share articles, analyze the impact of their research and track research by others.
- Research Gate has similar functions to Academia.edu and also generates a research impact factor for uploaded research, based on factors such as 'classical' citations and downloads.
- PLoS provides an additional list of open data repositories:
<http://journals.plos.org/plosone/s/data-availability#loc-recommended-repositories>

Innovators should direct further questions about Grand Challenges Canada's open access requirements to their Grand Challenges Canada Program Coordinator.

Appendix 1

GRAND CHALLENGES CANADA'S OPEN ACCESS APPROACH – COMPARISON TO PREVIOUS TERMS

	License	Embargo Period	Datasets	Timeframe	Post-Project Reporting
Previous Grand Challenges Canada Policies	Not specified	Not specified	Deposit in open access repository	Not specified	Not required
New Grand Challenges Canada Policies	CC BY	Immediate open access to published articles; no embargo period permitted	Deposit in open access repository	Typically by one year after project completion	Periodic reporting required

Last updated: October 5, 2016