

Road to Academic Success:

Grant Writing and Publishing

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Disclosures

- **Gil Kaplan, MD, MPH, AGAF, FCAHS:** Speaker's bureau – AbbVie, Amgen, Janssen, Pendopharm, Pfizer, Sandoz, Takeda; grant/research support – Ferring; consultant – Gilead.
 - Associate Editor of Gastroenterology.
 - Previous Associate Editor of American Journal of Gastroenterology and Journal of the Canadian Association of Gastroenterology
 - CIHR Grant Review Committee Member: Population Health Committee
- **Amanda Ricciuto: None**



Grant Writing



Project Grant: Spring 2022 results

405
Grants funded

\$325M
Total investment

- 2095 grants submitted
- 50% of applications are streamlined (i.e. not discussed within committee)
 - Top versus Bottom Grants
- 405 grants awarded
 - 113 awarded to early career investigators
 - 92 before equalization [proportion of funded grants awarded to ECI is equal to the proportion of applications from ECI]
- The average grant size/duration is approximately \$803,095 over 4.43 years
- An reduction of 23.5% to the budgets of funded applications to allow CIHR to fund a larger number of highly ranked projects.

What happens in a CIHR Committee?

1. Conflicted committee members leave the discussion
2. Streamlined applications are identified based on 3 reviewer scores
 - Option advocate for discussion in committee
3. Three reviewers announce their scores
4. Reviewer 1 provides detailed summary with rationale of score
 - Reviewer 2 and 3, provide additional insight +/- contradictory point of view
5. Open discussion by other committee members
 - likely did not read grant in detail
6. Consensus score is agreed by three reviewers
 - A reviewer may increase or decrease their score based on discussion
7. Sex and Gender Considerations
8. Budget appropriateness is discussed
9. All committee members score grant +/- 0.5 of the consensus score
10. Scientific Officer compiles key comments from discussion

Overview of Grant Review: CIHR Committee

Overview

The adjudication worksheet should be completed in the following manner:

- For the Initial Score below, select a rating between 0-4.9.
- Take the following criteria into consideration when entering your initial score: (1) Significance and Impact of the Research, (2) Approaches and Methods and (3) Expertise, Experience and Resources.
- In the Top/Bottom section, please indicate whether the application is competitive (top) or non-competitive (bottom) in its current form.
- Provide a critical assessment of the application, as well as constructive feedback based on the objectives and evaluation criteria described in the [funding opportunity](#).

Initial Score	Score	Max.	Increment	Multiplier	Weighted Score
Initial Score	<input type="text"/>	4.9	0.1	1.0	

Top/Bottom Group

In this section, please indicate whether the application is competitive (top) or non-competitive (bottom) in its current form. The proportion of applications deemed competitive or non-competitive (top or bottom) may vary depending on the overall quality of the applications assigned to you for review.

Top/Bottom Selection

- Top
- Bottom


Score from 0 to 4.9

Based on three criteria:

- 1) Significance and Impact [25%]
- 2) Approach and Methods [50%]
- 3) Expertise, Experience and Resources [25%]

Discussed with CIHR Committee

Summary of Application

Strengths and Weaknesses 

Based on three criteria:

- | | |
|--|-------|
| 1) Significance and Impact | [25%] |
| 2) Approach and Methods | [50%] |
| 3) Expertise, Experience and Resources | [25%] |

Written reviews are not thorough assessments of your grant, but justification to the committee of not funding your grant. High level critique of a grant is done with internal peer review committees.

Overview of Grant Review: CIHR Committee

Please indicate your appraisal of the integration of sex as a biological variable as a strength, weakness, or not applicable to the proposal.


- Strength
- Weakness
- Not applicable

The inflammatory bowel diseases (IBD) affect both sexes with a slight female preponderance. The biological attributes (i.e. sex) of IBD are different between males and females. For example, sex hormones play a role in inflammation. Our methodology accounts for sex; specifically, all of our analyses will be stratified by males and females.

Please indicate your appraisal of the integration of gender as a socio-cultural determinant of health as a strength, weakness, or not applicable to the proposal.

- Strength
- Weakness
- Not applicable

Gender-role differences may also contribute to differences in IBD outcomes as healthcare utilization and adherence to medications is often different between women and men. We will also explore potential differences in gender-roles from questionnaires. Furthermore, our questionnaire will include a covariate that asks the participant to identify their gender identity (i.e. male, female, or non-binary).

Budget Recommendation 

Applicant has a sex and gender certification by CIHR and will oversee sex and gender study design and analyses.

CIHR: “Budget recommendations are not factored into the overall rating of an application”

Overview of Grant Review: Knowledge Translation Plan

Partnered/Integrated Knowledge Translation (iKT) projects

Project requires a partner AND/OR a knowledge user?



Crohn's and
Colitis Canada
Crohn et
Colite Canada

- Letter of Support
- Financial support
 - Direct \$, in-kind support (knowledge translation)
- Knowledge User: e.g. Kate Lee, CCC Staff

Overview of Grant Review: CCC

- 2021 Grant-in-Aid

Dr. Amanda Ricciuto, The Hospital for Sick Children: Dr. Ricciuto's research will advance our understanding of long-term health outcomes and health services utilization in patients with a complication of IBD called primary sclerosing cholangitis. The study will help inform resource allocation and patient counselling activities.

My Experience

- Almost didn't happen
- Topic/knowledge gap
- Mentor
- Team – co-investigators/collaborators
- Know your audience
- ***internal peer review*** (not just your buddies)
- Figures
- Importance of preliminary data/feasibility/ “believability”
- More to it than the x-page proposal

General ECI Tips

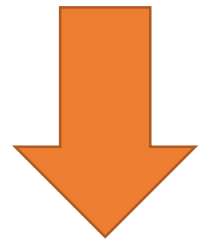
- Mentor
- Internal peer review (individuals not in your immediate field)
- Reviewer in training courses (CIHR RiT) / grant review observerships
- Play to your strengths
- Invest in building infrastructure
- Spend your money
- Get the right help
- Continue to seek out/ “use” mentors
- Balance pubs/grant applications
- ?be picky with grant submissions
- Trainees



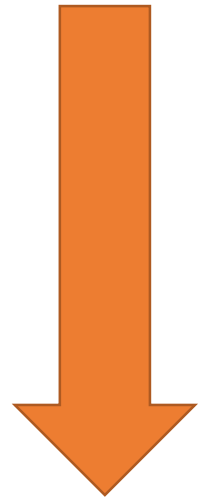
Publishing Your Work



Editor



Associate Editor



- 1. Cover Letter
 - 2. Abstract
 - 3. Manuscript
- *Help me help you!



Impact

Change Clinical Practice



Novelty

Methods



Associate
Editor

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graph TD; AE[Associate Editor] --> R[Reject]; AE --> T[Transfer]; AE --> Re[Reviewers]; Re --> R1["#1: Content/Clinical"]; Re --> R2["#2: Methodology"]; Re --> R3["+/- #3: Statistical Reviewer"]; R1 --> AE; R2 --> AE; R3 --> AE; Note["* Help the AE – suggest reviewers!"]
```

Reject

Transfer

Reviewers

#1: Content/Clinical

#2: Methodology

+/- #3: Statistical Reviewer

* Help the AE – suggest reviewers!

Associate Editor

+

Reviewers

Reject

Transfer

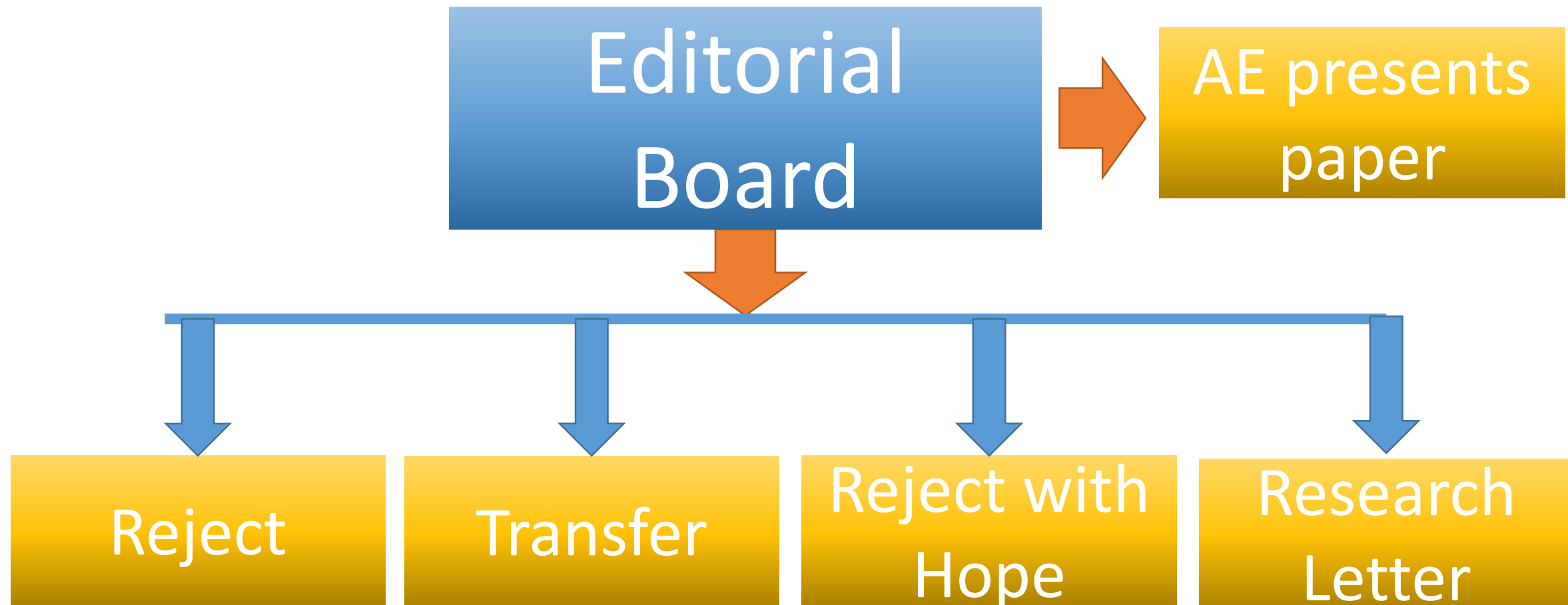
Editorial Board

X

X

Methods

Impact



- Maximum of 6 individual authors
 - 1000 words
 - 1 table or figure
 - 1000 words of supplemental text for methods
 - Two total figures or tables as supplement
- ***Does not count towards impact factor of journal

Knowledge Translation Plan: *Maximize Citations for Impact Factor*

Molodecky NA, Soon IS, Rabi DM, Ghali WA, Ferris M, Chernoff G, Benchimol EI, Panaccione R, Ghosh S, Barkema HW, Kaplan GG. Increasing incidence and prevalence of the inflammatory bowel diseases with time, based on systematic review. *Gastroenterology*. 2012 Jan;142(1):46-54.

Cited over **5100 times** in Google Scholar.




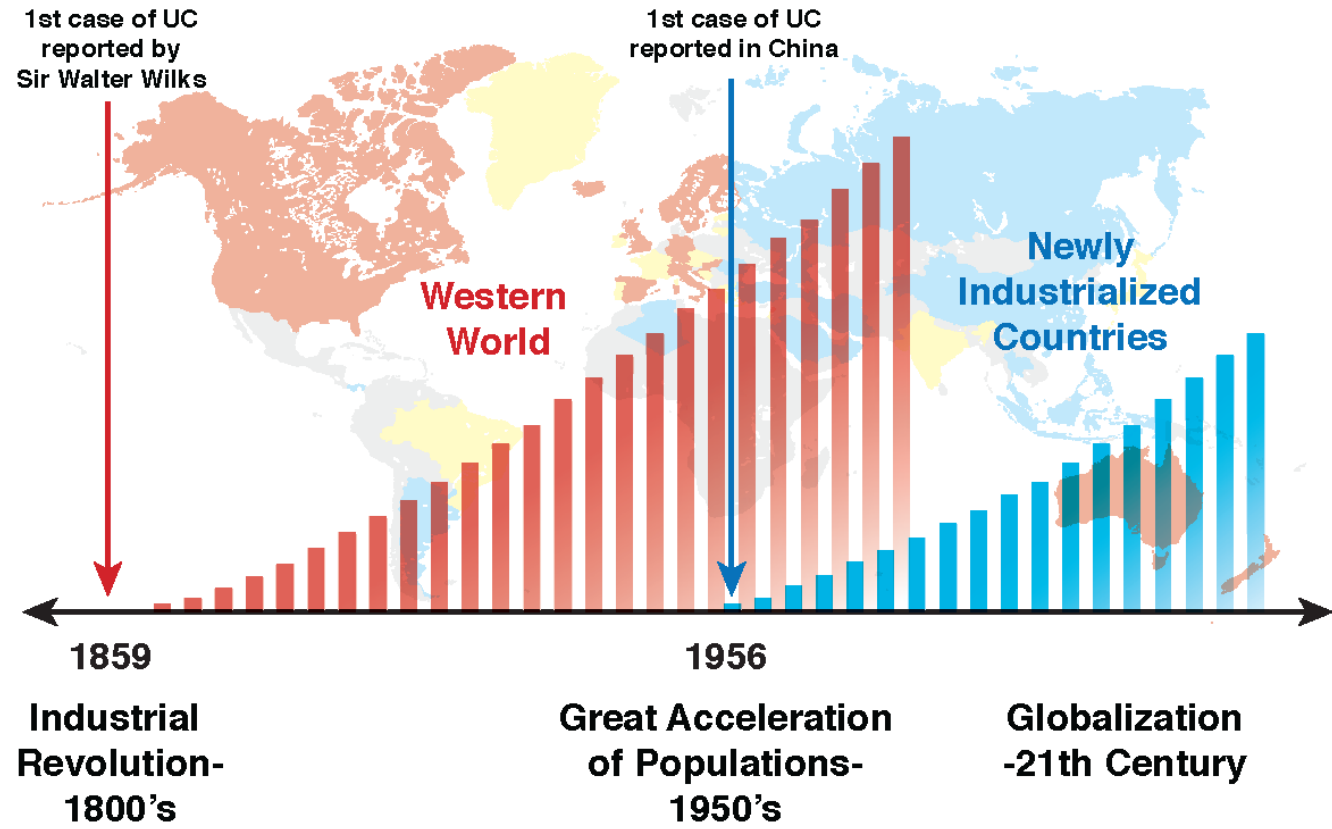
Issue Highlights

- Electrical Stimulation for Dysphagia
- Risk of Infliximab Cessation
- Predicting Spontaneous Clearance of Acute HCV Infection
- The Pathogenesis of Breast Milk Jaundice

Knowledge Translation Plan: *Maximize Citations for Impact Factor*



- Social Media 
- Graphical Abstracts
- Video Abstracts
- Cover Page
- Figures to present at meetings
- Interactive online data interaction: https://kaplan-gi.shinyapps.io/COVID_Serology



Kaplan & Ng. *Gastroenterology*. 2017





Writing Grants

Publishing Your Work

**What have you learned from
successes and rejections?**

