

# Research Pitch Competition

2022-2023 Guidelines

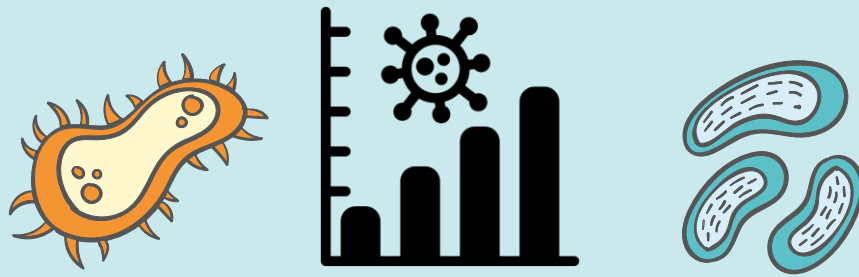


Got questions? Need resources or help?  
Email the Competition Coordinator  
Toby Le. [toby.le@umanitoba.ca](mailto:toby.le@umanitoba.ca)

# Table of Contents

(Click to Access Sections  
After Downloading as PDF)

|   |          |
|---|----------|
| <u>About the Research Theme</u> .....                           | Page 3   |
| <u>Examples</u> .....   | Page 4   |
| <u>Awards &amp; Benefits</u> .....                              | Page 5   |
| <u>Eligibility &amp; Bonus Points</u> .....                     | Page 5   |
| <u>Competition Instructions</u> .....                           | Page 6   |
| <u>Deadlines</u> .....  | Page 7   |
| <u>Publication Authorship &amp; Contribution Contract</u> ..... | Page 8-9 |
| <u>Elements of a Research Pitch</u> .....                       | Page 10  |
| <u>Tips on how to get started</u> .....                         | Page 10  |
| <u>General Format</u> .....                                     | Page 11  |
| <u>Rubric for Poster</u> .....                                  | Page 12  |
| <u>Rubric for Abstract</u> .....                                | Page 13  |
| <u>Message from coordinator</u> .....                           | Page 14  |
| <u>Resources</u> .....  | Page 14  |



## 2022-2023 Research Theme

**“Limiting the spread of infectious diseases during a humanitarian crisis”**

During a humanitarian crisis such as a natural disaster, a political crisis, or war, the spread of infectious disease can be amplified due to limited resources, population displacement, inadequate living conditions, lack of nutrition etc. This is a multidisciplinary issue that can be approached from many areas of STEM (science, technology, engineering and math).

**Your objective is to create a research pitch which addresses an issue that relates both infectious diseases and a humanitarian crisis in our time.**

Pick any specific field of STEM that you are interested in and use it as an angle to investigate the issue and/or possible solution. Different STEM approaches can include chemistry, physics, math, statistics, biology, microbiology, epidemiology, public health, community health, medicine, social sciences, engineering etc.

**Be Creative !**

# Examples of limiting diseases during a humanitarian crisis

**Example Research Problem #1 :** The Ebola virus disease outbreak in West Africa from 2013-2016 resulted in reduced healthcare services. Measles outbreaks are common secondary infections that occur after humanitarian crises. Due to the Ebola outbreak, there was reduced reporting and tracing of measles cases during the time, and it was unknown if the virus was spreading.

**Experimental Approach:** A retrospective serological study was performed on 80 clinical samples that were negative for Ebola, but patients exhibited symptoms such as fever, diarrhea or vomiting. An immunofluorescence assay for Measles was performed on these samples.

**Outcome:** Measles IgM was found in 13/80 samples (16%). Given the high infectivity rate of Measles, these results indicated the need for rapid diagnostics to prevent a secondary outbreak of measles.

**Source:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5443435/pdf/16-1682.pdf>

**Example Research Problem #2:** The SARS-CoV-2 pandemic resulted in disproportionate infections in marginalized populations. Underrepresented groups and/or geographical areas had limited access to COVID-19 testing.

**Experimental Approach:** A free community-based testing initiative using mobile testing sites was deployed in Chicago. These mobile sites were stationed in community areas with marginalized communities and where lower testing rates per population had been identified. Demographic information was collected at the time of sample collection, samples underwent reverse transcriptase PCR testing for SARS-CoV-2.

**Outcome:** Cumulative testing from the mobile site had a higher percentage of positive tests when compared to other sites. Demographic information of those tested at these sites showed individuals were more likely to reside in an economically marginalized area. The mobile sites were successful in increasing the accessibility of COVID-19 testing.

**Source:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8118149/pdf/mm7019a4.pdf>

Note: These are examples of research IDEAS! NOT ABSTRACTS.  
Be creative! Got an idea but unsure about it? Message the coordinator!



# Awards & Benefits

- Submissions (i.e. abstract AND poster) that are scored 85% or above will be selected for publication
  - Top 3 submissions will also receive:
    - \$2000 – First Prize
    - \$1000 – Second Prize
    - \$500 – Third Prize
  - An opportunity to publish, which will look impressive on your CV



## Eligibility

- Registered in an undergraduate program at the University of Manitoba
  - Exemption can be requested from coordinator (Toby Le)

## ★ Extra Bonus Points

Bonus Points (+5%) will be rewarded to individuals/groups with past OR current trainee memberships in the MHRE Training Program

\*Final Discretion is left to the MHRE director

# Competition Instructions

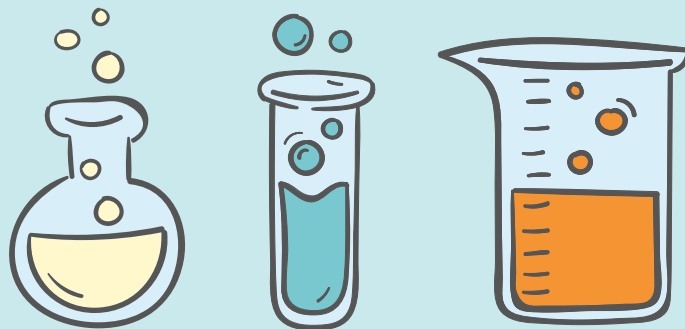
**Objective:** To create a research pitch which addresses an issue that relates both infectious diseases and a humanitarian crisis.

## About the Research Pitch:

- A research pitch is comprised of two-parts (see page 11 for details):
  - #1. A research poster
  - #2. A written abstract
- The research pitch must align with the competition theme
- ONLY one submission is allowed per team or individual

## About Individual or Team Submissions

- Research pitches can be created either independently or in a team
- Each team is allowed 2 undergraduate members max.
- **(Optional)** Teams of two individuals are allowed to have a 3<sup>rd</sup> member only if that individual is a postgraduate student from UM (Refer to page 14 on draft email to postgraduate students)





# Deadlines

**Deadline #1:** Email “Authorship & Contribution Contract” to coordinator **December 1<sup>st</sup>, 2022, at 11:59 PM CST**

**Deadline #2:** Email final research pitches to coordinator **January 30th , 2023, at 11:59 PM CST**

Note: Both poster & abstract should be in PDF format

All submissions are to be emailed to Competition Coordinator:  
Toby Le, [toby.le@umanitoba.ca](mailto:toby.le@umanitoba.ca)



# Publication Authorship & Contribution Contract

Deadline: December 1<sup>st</sup> 2022, 11:59 PM CST

In any collaborative research, it is always best practice to set clear expectations and discuss authorship order. The purpose of the authorship order on research publications is to impartially recognize the magnitude of contribution of each individual in the collaboration. Authorship order can change throughout the development of the collaboration, but it must be agreed upon by all individuals in the team. Transparency and fluid communication is the key to developing a respectful, impactful, and professional research collaboration.

## Section 1: What is the **tentative title** of the project?

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1. If this is an **independent** submission, complete Section 2 and submit form to coordinator
2. If this is a **team** submission, complete Section 3 and submit form to coordinator

## Section 2: Individual Submissions

You will be competing in this competition as an independent. If your pitch is selected for publication, you will be acknowledged as the only author for the submission.

Name (Print): \_\_\_\_\_

Email: \_\_\_\_\_

Signature: \_\_\_\_\_

Email this form to the competition coordinator, Toby Le, [toby.le@umanitoba.ca](mailto:toby.le@umanitoba.ca)





### Section 3: Team Submissions

You can have a maximum of only two undergraduate students on the team. A third member is permitted only if that individual is a postgraduate student from the University of Manitoba; this individual would also deserve authorship for their contribution. Also, if members of the team are contributing to equal magnitudes, you can also request for shared first-authorship.

Authorship Order (i.e. co-first, first, second, third) \_\_\_\_\_

Name (Print): \_\_\_\_\_ Email: \_\_\_\_\_

Signature: \_\_\_\_\_ % of Contribution \_\_\_\_\_

Brief Description of Role on the project:

Authorship Order (i.e. co-first, first, second, third) \_\_\_\_\_

Name (Print): \_\_\_\_\_ Email: \_\_\_\_\_

Signature: \_\_\_\_\_ % of Contribution \_\_\_\_\_

Brief Description of Role on the project:

Authorship Order (i.e. co-first, first, second, third) \_\_\_\_\_

Name (Print): \_\_\_\_\_ Email: \_\_\_\_\_

Signature: \_\_\_\_\_ % of Contribution \_\_\_\_\_

Brief Description of Role on the project:

It is agreed that authorship order may be renegotiated should an individual's responsibilities substantially change or should an individual fail to perform their role as stated above. A renewal of the authorship order must be agreed upon by **all** in the team. Email this form to the competition coordinator, Toby Le, [toby.le@umanitoba.ca](mailto:toby.le@umanitoba.ca)

# Elements of a Research Pitch

1. **Title (same as submitted abstract) | Authors and university affiliations**
2. **Introduction/Background:** Set the stage for the project! Explain your topic and its importance by referencing published literature. Be concise and include only relevant background information. Clearly state your research question.
3. **Hypothesis:** What do you think is the solution to your research question? Or what do you think is the explanation for the described scientific phenomenon?
4. **Proposed Methodology:** What research techniques and procedures will you apply to address your research question? And why did you select those techniques? What is your study model (i.e., cell lines/humans/animals/etc.)? What reagents and/or equipment will you use? What are your controls? (Tip: Include flow charts/visuals in the poster to help explain the method)
5. **Expected Results:** What do you think your findings will be? What do you think you will see after completing your proposed methodology? (Tip: The expected results should be specific to what your techniques are measuring)
6. **Significance of Research:** What are the implications of your research? Why is it important?
7. **\*New\* Knowledge Translation or Community Engagement:** In this competition, we want you to take your research a step further. *Assuming your research findings agree with your hypothesis*, come up with a creative approach on how you can share your research with your target audience.

Describe your community engagement idea and the approach rationale. Who is your target audience? And why? Will you have collaborators working with you on this engagement idea? If yes, what are their roles? How do you think this engagement idea will impact your target audience? (Note: For brevity, you may summarize this element into 1-2 sentences in the abstract. Explain in more detail in the poster)

## Tips on how to get started

- Step 1. Develop the elements of your research pitch
- Step 2. Take those elements and now present it into a poster
- Step 3. Review all elements and summarize it into an abstract



# General Format

A **research poster** is a graphical display of visuals and written content that can communicate your research proposal and attract public engagement.

**Submission Format:** PDF

**Dimensions:** 24" x 36" (60 cm x 90 cm) (Width x length)

**Font Size:** Title (70 – 80) | Headings (40-44) | Main Text (28-32)

**Poster Components:** Include all elements of your research pitch (See page 10)

**Referencing Style:** APA (American Psychological Association)

**Acknowledgement Logos:** MHRE | HSGSA | SSA | Rady Faculty | Faculty of Science | STEM Fellowship (page 14)

A **research abstract** is a written summary that highlights the major points of your research proposal

**Font Size:** 12

**Maximum Word Count:** 250-300 Words

**Abstract Components:** Summarize all elements of your research pitch

**Submission Format:** PDF

**Deadline #2:** Email final research pitches to coordinator  
by **January 30th , 2023, at 11:59 PM CST**

Note: Both poster & abstract should be in PDF format



All submissions are to be emailed to competition coordinator:  
Toby Le, [toby.le@umanitoba.ca](mailto:toby.le@umanitoba.ca)

# Poster Rubric

| Criteria  | 0 Points   Poor   | 1-2 Points   Fair   | 2-3 Points   Good  | 4-5 Points   Excellent   |
|---|---|---|--|--|
| <b>Introduction</b>                               | Missing   | Lacks clarity. Not related to literature  | Clear, but does not engage reader; attempts to connect to literature   | Clear, concise, engaging; Connected to the literature and purpose of research  |
| <b>Purpose</b>                                    | Missing   | Lack clarity; Includes irrelevant and unimportant information   | Clear, but not concise; Contains some irrelevant and unimportant information                                     | Clear, concise, and relevant   |
| <b>Proposed Methods</b>                           | Missing   | Inappropriate for purpose of research; Poor study design  | Somewhat connected with research topic but lacks study controls; mirror issues with design or methods of study;  | Relevant to research; Explains methods or resources used to conduct research; Includes valid appropriate controls in study design; Organized   |
| <b>Expected Results</b>                           | Missing   | Unclear; Not related to the proposed research   | Attempts to present expected findings with minimal specifics   | Clear, concise; Provides clear specifics of expected findings and accomplishments  |
| <b>Significant Impact</b>                         | Missing   | Unclear; lacks detail on contribution to society/discipline   | Attempts to connect research to discipline; somewhat unclear   | Clearly states how study advances the discipline, its important, or its potential applications   |
| <b>Community Engagement/Knowledge Translation</b> | Missing   | Not relevant to research users; Unclear   | Somewhat relevant to knowledge users/target audience; lacks creativity/engagement                                | Relevant to knowledge users/target audience; Creative; Engaging  |
| <b>Professional Writing</b>                       | Inappropriate verb tense, poor grammar, typos impede understanding                        | Inappropriate verb tense, poor grammar, but they do not impede understanding; Overly wordy; Contains three or more errors in language use | Few grammatical errors/types; Mixed verb tense; Somewhat wordy; Contains no more than two errors in language use | Defines all acronyms at first use; Correct verb tense; Writing style appropriate for profession; Contains no errors in language use; No or limited jargon  |
| <b>Poster Organization and Appearance</b>         | Lacks organization; Not visually effective; Unable to understand link between information | Somewhat acceptable organization but needs more work; Requires better utilization of colours, headings, white space, and graphics         | Acceptable organization with areas for improvement in utilization of white space, colours, headings, or graphics | Visually appealing and strongly effective presentation; Easy to comprehend; Creative utilization of colours, headings; and white space; Poster stands alone and does not require additional information; logical and intuitive flow of information |
| <b>Grand Total (Maximum 40 Points)</b>            |   |   |  |  |



# Abstract Rubric

| Criteria  | 0 Points   Poor  | 1 Point   Fair  | 2 Points   Good  | 3 Points   Excellent   |
|---|--|---|--|--|
| <b>Introduction</b>                               | Missing  | Lacks clarity. Not related to literature  | Clear, but not does not engage reader; attempts to connect to literature   | Clear, concise, engaging; Connected to the literature and purpose of research  |
| <b>Purpose</b>                                    | Missing  | Lack clarity; Includes irrelevant and unimportant information   | Clear, but not concise; Contains some irrelevant and unimportant information                                     | Clear, concise, and relevant   |
| <b>Proposed Methods</b>                           | Missing  | Inappropriate for purpose of research; Poor study design  | Somewhat connected with research topic but lacks study controls; mirror issues with design or methods of study;  | Relevant to research; Explains methods or resources used to conduct research; Includes valid appropriate controls in study design; Organized |
| <b>Expected Results</b>                           | Missing  | Unclear; Not related to the proposed research   | Attempts to present expected findings with minimal specifics   | Clear, concise; Provides clear specifics of expected findings and accomplishments  |
| <b>Significant Impact</b>                         | Missing  | Unclear; lacks detail on contribution to society/discipline   | Attempts to connect research to discipline; somewhat unclear   | Clearly states how study advances the discipline, its important, or its potential applications   |
| <b>Community Engagement/Knowledge Translation</b> | Missing  | Not relevant to research users; Unclear   | Somewhat relevant to knowledge users; lacks creativity/engagement  | Relevant to knowledge users; Creative; Engaging  |
| <b>Professional Writing</b>                       | Inappropriate verb tense, poor grammar, typos impede understanding | Inappropriate verb tense, poor grammar, but they do not impede understanding; Overly wordy; Contains three or more errors in language use | Few grammatical errors/types; Mixed verb tense; Somewhat wordy; Contains no more than two errors in language use | Defines all acronyms at first use; Correct verb tense; Writing style appropriate for profession; Contains no errors in language use          |
| <b>Length</b>                                     | Too long or too short  |   |  | 250-300 words  |
| <b>Grand Total (Maximum 24 Points)</b>            |  |   |  |  |



# Message from coordinator

Dear Undergraduate Students,

My name is Toby Le and I am the coordinator of the MHRE Research Pitch Competition (2022-23). The vision behind creating this competition is to help undergraduate students foster their individual creativity in research. More than just a competition, this is an opportunity for you to explore the innovative aspects of research, which is mainly a reiterative process of acquiring and integrating knowledge into new perspectives. For many of you, this will be a huge milestone in your academic journey as it is a very new experience of unique challenges and learning curves. My advice to you is **be resourceful** and **seek mentorship from others**. In addition to the resources identified below, I highly recommend that you complete the Google survey below to receive additional emails from me concerning workshops and resources. On top of that, I highly encourage you all to expand your network and seek expertise from postgraduate students. Do not be shy – ask for mentorship (See link to email draft below)! Likewise, be sure to email me if you have any questions/comments or need guidance. Always one email away: [toby.le@umanitoba.ca](mailto:toby.le@umanitoba.ca)

Cheers,  
Toby Le

Register to receive email resources from coordinator: <https://forms.gle/X9HuBNxDcu5n8v2W7>

## Resources

Draft email to postgraduate students – [Link](#)

Logos to include on poster – [Link](#)

How to make an academic poster in PowerPoint – [YouTube Link](#)

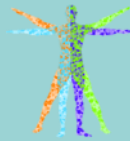
How to Write an Abstract for a Research Paper – [YouTube Link](#)

To support you all on this research experience, I am also collaborating with the STEM Fellowship organization to offer you research guidance via workshops and resources:

- Consultation one-on-one - [Link](#)
- Register for Poster Workshop on Saturday, October 29<sup>th</sup> 3 PM CST – [Link](#)
- Register via form above to receive more resources from coordinator



University  
of Manitoba




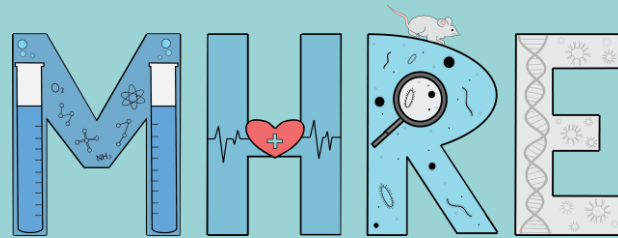
HSGSA

Faculty of Science



UM | Rady Faculty of  
Health Sciences

STEM   
Fellowship



Good luck!

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