**Supplemental Document 1. Sample Mini-Grant Instructions and Rubric provided to students in Episode 1.**

**Outbreak Simulation Mini-Grant**

This is the initial assignment that will be used to determine the number of action points that each research group will start with.

The goal of this project is to give you the chance to design your own experiments to assess the infective agent causing the current pandemic. This assignment will prepare you for any future grant writing, an important part of achieving research funding.

What the Grant should include:

A) Summary of Problem in the context of modern world health and biological knowledge (ie. Why you need funding)

B) What you plan to do (in broad terms) to identify and fight the disease (ie. How you will use the funding)

C) What makes your Research group the best to do this research (ie. Why are YOU special).

For part C the students are welcome to use creative license.

Grammar: Points will be deducted for improper use of grammar and incorrect spelling. It is important to use the correct annotations and jargon relevant to the field.

Page requirement: 1.5-2 pages single spaced

Organization: Make sure that you include all the sections mentioned below in a standard and logical paragraph structure. Please clearly designate each section with a bolded title. Please turn in an assignment that is single spaced with 12pt Arial or Times New Roman Font with 1 inch margins.

Introduction/Background: Provide a thorough but succinct summary of the relevant background that lead you to your hypothesis. Suggested length: 1-2 paragraphs.

Specific Aims/ what you plan to do (each should be 1 paragraph):

Hypothesis: Provide an overarching hypothesis and at least 2 separate specific sub hypothesizes that you plan to address with your experiments. Both of the sub hypothesizes should address the main hypothesis.

Rationale: One or 2 sentences that expand upon your introduction to explain why these specific experiments should be conducted.

Proposed experiments: A short description of the experiments that you plan to perform in order to address each of your sub hypothesizes.

Expected outcomes: A short description of the outcomes you expect to have following your experimentation. You may also include alternative experiments that you intend to conduct should the planned experiments not work as expected.

Impact/ Conclusions: Include a brief description of what you expect to find from your experiments and how these experiments are important or will advance scientific understanding in the field.  Suggested length: 1-2 paragraphs

References: Include at least 3 properly cited (*Nature* citation style) references relevant to the field. These DO NOT have to be primary sources, although you are welcome to have some if you want.

**Mini Grant Rubric**

**Total          /100pts**

Grammar   \_\_\_\_/2pts

Page requirement \_\_\_\_/1pts

Organization     \_\_\_\_/5pts

Introduction/Background \_\_\_\_/10pts

Specific Aims:

            Hypothesis \_\_\_\_/13pts

            Rationale \_\_\_/12pts

Proposed experiments \_\_\_\_/15pts

Expected Outcomes \_\_\_\_/12pts

Impact/ Conclusions   \_\_\_\_/10pts

References   \_\_\_\_/5pts

**Extended Mini Grant Rubric**

**Writers:**

**Total          /90pts**

Grammar   \_\_\_\_/2pts

Page requirement \_\_\_\_/1pt

Organization/Formatting    \_\_\_\_/5pts

|  |  |
| --- | --- |
| **Feature**  | **Comment**  |
| 12pt. Arial or Times New Roman   |    |
| 1 inch margins   |    |
| Single Spaced  |    |
| Clearly marked sections  |    |

Introduction/Background \_\_\_\_/10pts

|  |  |
| --- | --- |
| **Feature**  | **Comment**  |
| Hook  |    |
| Description of concepts   |    |
| References   |    |

Specific Aim \_\_\_/50pts

|  |  |  |  |
| --- | --- | --- | --- |
|   | **Specific Aim 1**  | **Specific Aim 2**  | **Specific Aim 3?**  |
| **Feature**  | **Comment**  | **Comment**  | **Comment**  |
| Hypothesis   |        |    |    |
| Rationale   |        |    |    |
| Experiments   |        |    |    |
| Predicted Outcomes  |        |    |    |

Impact/ Conclusions   \_\_\_\_/10pt

|  |  |
| --- | --- |
| **Feature**  | **Comment**  |
| What these experiments will show  |    |
| Why these experiments are important   |    |

 References   \_\_\_\_/5pts

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| **Feature**  | **Comment**  |
| Number   |    |
| Formatted as in *Nature*  |    |

Additional Comments: