Risk Assessment Form (3)

Must be completed before experimentation.

Student's Name(s) Maiya Raghu

Title of Project The effect of blue light on oxidative stress in C. elegans

To be completed by the Student Researcher(s) in collaboration with Designated Supervisor/Qualified Scientist:
(All questions must be answered; additional page(s) may be attached.)

1. List all hazardous chemicals, activities, or devices that will be used; identify microorganisms exempt from pre-approval (see Potentially Hazardous Biological Agent rules).

   Caenorhabditis elegans (C. elegans) worms, household bleach (5% sodium hypochlorite), dichlorofluorescein diacetate, and 70% isopropyl alcohol will be used.

2. Identify and assess the risks involved in this project.

   C. elegans is a Biosafety level 1 organism. Exposure to C. elegans poses negligible risk because it is non-hazardous, non-pathogenic, non-parasitic and cannot infect vertebrate cells. Bleach, dichlorofluorescein diacetate and isopropyl alcohol can all cause eye, skin and mucous membrane irritation.

3. Describe the safety precautions and procedures that will be used to reduce the risks.

   Standard laboratory practices will be employed. A lab coat, goggles and nitrile gloves will be worn when handling the dishes in which the worms will be maintained, when cleaning work surfaces on a daily basis with household bleach, and when applying dichlorofluorescein diacetate and alcohol to worms.

4. Describe the disposal procedures that will be used (when applicable).

   The C. elegans will be soaked in 70% isopropyl alcohol within their dishes for 24 hours before sealing the dishes with tape, placing the containers in a tied plastic bag and disposing of the bag in a biohazard waste container.

5. List the source(s) of safety information.

   "Nematodes." Ward's Science. Available online at https://boreal.com/assetsvc/asset/en_CA/id/16920398/contents
   Safety data sheets for household bleach, 70% isopropanol and 2', 7'-dichlorofluorescein diacetate. Available online at https://www.camanchem.com

To be completed and signed by the Designated Supervisor (or Qualified Scientist, when applicable):
I agree with the risk assessment and safety precautions and procedures described above. I certify that I have reviewed the Research Plan/Project Summary and will provide direct supervision.

Brian Belanger	Brian Belanger Digitally signed by Brian Belanger Date: 2019.10.25 16:08:13 -04'00'	October 17, 2018
Designated Supervisor's Printed Name	Signature	Date of Review (mm/dd/yy)

Science teacher, Syosset High School	MrBelangerChemistry@gmail.com
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Chemistry and science research teacher for 33 years

Experience/Training as relates to the student's area of research