Regulated Research Institutional/Industrial Setting Form (1C)

This form must be completed AFTER experimentation by the adult supervising the student research conducted in a regulated research institution, industrial setting or any work site other than home, school or field.

Student's Name(s) Kallista Zhuang

Title of Project Xenoestrogen Bisphenol-A's Neurotoxicity via Estrogenic Activity and Resulting Alzheimer's Disease Pathogenesis

To be completed by the Supervising Adult in the Setting (NOT the Student(s)) after experimentation:
(Responses must be on the form as it is required to be displayed at student's project booth; please do not print double-sided.)

The student(s) conducted research at my work site:

1. Did you or your proxy (e.g. graduate student, postdoc, employee) mentor or provide substantial guidance to the student researcher? ☑ Yes ☐ No
   a. If no, describe your and/or your institution's role with the student researcher and his/her project (e.g. supervised use of equipment on site without ongoing mentorship and sign below.

   b. If yes, complete questions 2 –5.

2. Is the student's research project a subset of your ongoing research or work? Use questions 3, 4 and 5 to detail how the student's project was similar and/or different from ongoing research or work at your site. ☐ Yes ☑ No

3. Describe the independence and creativity with which the student:
   a. developed the hypotheses or engineering goals for the research project

      The student had the idea of using an environmental pollutants and linking its toxicity to Alzheimer's Disease. I guided the student for more nuanced aspects of the student's research. The student still made final decisions of whether to study certain mechanisms based on her further reading of primary and secondary papers.

   b. designed the methodology for his/her research project

      Based on the papers the student read, the student would propose methodology and chemicals for the project. Due to safety and logistical reasons, I would work together with the student to determine feasible and safe methdology (of those proposed by the student) and materials for the project.

   c. analyzed and interpreted data

      For majority of the trials, the student independently analyzed and interpreted the data generated by the plate reader. The student would then report the results. Occasionally, when the data were displaying unusual patterns or were unexpected, I would go over the data with the student to ensure there were no technical errors.

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Regulated Research Institutional/Industrial Setting Form (1C) Continued

Student's Name(s) Kallista Zhuang

4. Detail the student's role in conducting the research (e.g. data collection, specific procedures performed). Differentiate what the student observed and what the student actually did.

After brief orientation in the lab at the beginning of the student's research, the student learned the methodology and safety precautions needed for each assay. The student would carry out the MTT cell viability and LDH assays independently and under my supervision. For the ELISA assay, the student received some assistance in executing the assay due to the complex nature of the protocol. The student also managed the storage of the chemicals and cell plates.

For most of the time in the lab, the student determined independently how many trials, number of wells per treatment, and combinations of treatment were needed.

In regard to data collection, the student would obtain data from the cell plate reader and subsequently would use excel and prior knowledge of statistical formulas to organize the data and generate numerous figures.

In sum, the student generally made final decisions for the project and conducted a substantial portion of the research independently, as well as received decent guidance/advice for the direction of the project.

5. Did the student(s) work on the project as part of a group? ☐ Yes ☑ No
If yes, how many individuals were in the group and who were they (e.g. high school students, graduate students, faculty, professional researchers)?

No, the student did not work as part of a group for this project.

I attest that the student has conducted the work as indicated above and that any required review and approval by institutional regulatory board (IRB/IACUC/IBC) has been obtained. Copies are attached if applicable.
I further acknowledge that the student will be presenting this work publicly in competition and I have communicated with the student research regarding any requirements for my review and/or restrictions of what is publicized.

Wei Zhu
Supervising Adult's Printed Name

Zhuwei
Signature

Professor
Title

SUNY Old Westbury
Institution

01/28/20
Date Signed (must be after experimentation) (mm/dd/yy)

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