

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) Hammad Hassan

Title of Project Targeted inhibition of a novel MALT1 and MAPK signaling network synergistics

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?

☐ Yes ☒ No

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.
3. Describe the independence and creativity with which the student:
 - a. developed the hypotheses or engineering goals for the research project
Hammad came into lab not knowing how to conduct experiments. However, he had preliminary knowledge regarding the research going on in our lab and was consequently paired with the group investigating roles of the MALT1 gene. Hammad regularly met with the group in order to talk about his hypotheses and fine tune his ideas.
 - b. designed the methodology for his/her research project
Hammad originally did not have enough knowledge on how to design research experiments. He was guided by us through his time at Cornell. However, by the end of his time at the lab he had become familiar with lab techniques and thus had the independence to design his own methodology.
 - c. analyzed and interpreted data
Hammad took online courses in order to become familiar with the programs needed to analyze his data; he learned to use Graphpad Prism, Image J, and the Compusyn software. He presented that data at lab meetings with his explanations which were further fine tuned by us.

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

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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.

Hammad took an extensive amount of time reading research papers and then used that understanding to develop potential hypotheses. Those ideas were then built upon by our lab including myself. Hammad was taught how to conduct experiments by us and then conducted the experiments by himself. Hammad then analyzed his data after learning how to use the softwares needed for this research inquiry. More specifically, Hammad work explored the mechanisms surrounding MALT1 functions and consequently identified a novel molecular interaction between MAL1 and the MAPK signaling pathway. He observed these interactions by conducting an extensive amount of western blots. He later used that understanding to conduct growth inhibition experiments which potentially could be a way to develop a combinatorial therapeutic approach.

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)?

Hammad's project was a entity of his own in the lab.

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.

Jimmy Wilson

Supervising Adult's Printed Name

Weill Cornell Medical College

Institution

413 E 69th St, New York, NY 10021

Address

Jimmy Wilson

Signature

Digitally signed by Jimmy Wilson
DN: cn=Jimmy Wilson, o=Weill Cornell, ou,
email=jw4002@med.cornell.edu, c=US
Date: 2019.12.09 10:30:18 -0500

Research Tech II

Title

12/06/19

Date Signed (must be after exper-
imentation) (mm/dd/yy)

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Email/Phone