

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) Gillian Gold

Title of Project The role of Wnt/ β -catenin signaling in angiogenesis and BBB formation in EAE (Multiple Sclerosis)

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

Gillian discussed the hypotheses regarding our ongoing projects in order to develop her own hypothesis.

- b. designed the methodology for his/her research project

The supervising scientists demonstrated the methodology, which Gillian then performed.

- c. analyzed and interpreted data

Gillian analyzed and interpreted data with statistical methods recommended by the supervising scientists.

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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.

Gillian observed the qualified scientist perform dissections on mice for brain and spinal cord samples. These samples were taken for four different time periods: P3, healthy adult, acute EAE, and chronic EAE. Gillian assisted in performing the fluorescent in situ hybridization and immunofluorescence for these samples. Gillian used confocal microscopy to take images of blood vessels (specifically, the ventral, dorsal, and lateral funiculi in white matter) in the brain and spinal cord samples. These images aimed to understand the progression of angiogenesis through the expression Eglf7, Apln, and MCAM. She also used confocal microscopy to image blood vessels for the expression of three transcription factors associated with the maturation of the Blood Brain Barrier (BBB): Zic3, FoxQ1, and FoxF2. After collecting this data, Gillian used ImageJ to quantify the expression of both the angiogenesis markers and the transcription factors.

5. Did the student(s) work on the project as part of a group?
If yes, how many individuals were in the group and who were they (e.g. high school students, graduate students, faculty, professional researchers)?

☐ Yes ☒ No

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.

Dritan Agalliu

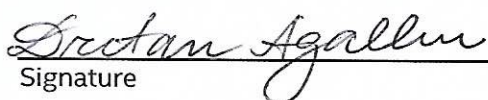
Supervising Adult's Printed Name

Columbia University Medical Center

Institution

650 West 168th Street Black Building Room 310 New York, NY 10032

Address



Signature

Principal Investigator

Title

08/30/19

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

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Email/Phone