

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) Isabelle Garcia-Fischer

Title of Project Auricular Vagal Nerve Stimulation in Brain and Gastric Outcomes

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

When presented with the overall research project, Isabelle promptly understood the role her portion of data would play in the big picture, and was able to formulate hypotheses on the effects of the intervention on patients' physiological responses.

b. designed the methodology for his/her research project

Isabelle was very successful in effectively organizing different outcomes from tests and questionnaires so that subsequent analyses and hypothesis testing would be facilitated.

c. analyzed and interpreted data

With the support of other lab members, Isabelle quickly learned how to use softwares for physiological data collection and analysis, as well as for statistical testing. She was also able to interpret her results in the wider context of the project, at the same time understanding the limitations of the dataset.

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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.

Isabelle observed Dr Kuo during clinical visits with GI patients and lab members during behavioral study visits in which the liquid meal tests and vagal nerve stimulation were performed. Furthermore, she digitized and organized in spreadsheets the data from liquid meal tests performed on healthy controls and functional dyspepsia patients, including questionnaires, volumes consumed, and symptoms ratings. For the functional dyspepsia group, she also performed heart rate variability analysis on electrocardiography data collected during the visits. She familiarized herself with Acknowledge, Matlab, Qubios, and R softwares to perform such analyses.

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

Isabelle was supported in her research activities by a senior post-doc and two research coordinators.

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.

Dr. Braden Kuo
Supervising Adult's Printed Name


Signature

Gastroenterologist
Title

Massachusetts General Hospital
Institution

08/22/19
Date Signed (must be after experimentation) (mm/dd/yy)

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