

# 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) Maria Russotti

Title of Project Enhancement of Oxidoreductase Cofactor Systems for Enzymatic Activity with 3'NADP: A Novel Model for NAD-capp

## 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 engineering goals were a result of a discussion between Maria and the Lab PI, Scott Banta, who had a few projects he was interested in pursuing.

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

The methodology was for the most part following existing protocols. Maria ran her own DNA and protein gels, and also performed her own assays. Maria innovatively planned out her own assays by choosing volumes and concentrations.

- c. analyzed and interpreted data

Data analysis was a dual effort. After analyzing the data, we discussed what the next set of data should be to understand the kinetics more.

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

Student's Name(s) **Maria Russotti**

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.

During the first couple of weeks, Maria observed the techniques and protocols, such as how to run a gel, perform and assay, and grow cell cultures.

After that, Maria performed a lot of the experiments herself. She ran assays and then designed the next set of assays. She ran her own gels, and also worked with cell cultures.

There was one week I was away, and Maria worked with another PhD student in the lab to transform and express some of the mutated proteins we were making.

Maria solely came up with the idea of applying oxidoreductases to the capture of CO<sub>2</sub>.

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)?

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.

**Salomon Vainstein**


Supervising Adult's Printed Name

**Columbia University**

Institution

**500 W 120th St Suite 801, New York, NY 10027**

Address



Digitally signed by Salomon  
Vainstein

Signature

**PhD Student**

Title

**09/01/19**

Date Signed (must be after experi-  
mentation) (mm/dd/yy)

**sv2530@columbia.edu**

Email/Phone