



## *SBRP SHORT TERM RESEARCH TRAINING PROGRAM*

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- SBRP-Student Biomedical Research Program
- Short Term-8 weeks
- Funded in part by an NIH T35 Short Term Research Training Grant.



## *SBRP SHORT TERM RESEARCH TRAINING PROGRAM*

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- An NIH T35 training grant requires 8-12 consecutive weeks of research training.
- Our program will run 8 weeks.
- Program will run in the first branch year (3<sup>rd</sup> year of medical school).
- The program will be offered in Jan/Feb 2020 or March/April 2020.
- To participate students must select a research elective for one of these two periods.



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- NIH pays a stipend of \$ 4100 for 8 weeks.
- Mentor must be a University of Michigan faculty member.
- Forty hrs. per week effort on research.
- Application and info at:

<https://medstudents.medicine.umich.edu/sbrp-nih-supported-short-term-biomedical-research-training-program>



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## How the Program is Funded:

- NIH (National Heart Lung Blood Institute) Training Grant (32 spots).
- Medical School Endowments- we will fund as many applications as we can at the 4100 dollar level if there are more than 32 meritorious applications. The minimum you will receive for participating in the program is 2000.00.
- The funding is paid as a stipend.



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## NIH Funding

- Grants that are relevant to the National Heart Lung Blood Institute mission may receive a higher priority for NIH funding.
- However the mission of the NHLBI is very broad.
- ..and not all the funding for the program comes from the NIH.



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## Mentors

- There is a list of mentors who have agreed to participate in the grant application on the website:

<https://medstudents.medicine.umich.edu/sbrp-nih-supported-short-term-biomedical-research-training-program>

- However any University of Michigan faculty can serve as a mentor. Mentors can be added to the training grant.



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## Application

- Has a student and a mentor section.
- All sections due October 1.
- Applications reviewed by a Committee.



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## **The SBRP Application-Student Section**

- Title (20 words).
- Hypothesis (750 characters including spaces).
- Background (2500 characters including spaces)
- Research Design and Methods (3500 characters including spaces).
- What will be the specific tasks, activities and responsibilities of the student on a daily basis (1000 characters including spaces).





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## The SBRP Application (Continued)

- Significance (750 characters including spaces).
- References (4000 characters including spaces).



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## **The SBRP Application-Mentor Section**

- What are the educational objectives of the proposed research project?
- Describe the specific role and activities of the student.
- Describe your research training environment. Who will provide daily supervision?
- Did the student participate in the development of the research objectives and hypothesis?



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- Was the proposal written primarily by the student?
- Describe why this student is well-suited to be a research trainee.



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- Student and Mentor Applications are completed online. The student submits their application and then we forward the application to the mentor who completes their section.

<https://medstudents.medicine.umich.edu/sbrp-nih-supported-short-term-biomedical-research-training-program>



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## Review Criteria (5 points each)

1. Clear statement of problem, research question and hypothesis.
2. Evidence of scholarly and critical literature review.
3. Research design and methodology are appropriate to answer the research question/hypothesis.
4. Student role and activities are clearly defined.
5. Student/mentor relationship is strong, and there is evidence of active mentoring throughout the proposal.



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## The SBRP Application

- Title (20 words).
- Hypothesis (750 characters including spaces).
- Background (2500 characters including spaces).
- Research Design and Methods (3500 characters including spaces).
- What will be the specific tasks, activities and responsibilities of the student on a daily basis (1000 characters including spaces).



## *Title (20 Words)*

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- Summarize Project in 20 words.
- “Influence of preoperative fasting blood sugar guideline implementation on fasting blood sugar values before surgery”
- Not a critical part of the application.



## *Hypothesis (750 characters)*

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### **First Review Criteria:**

Criteria 1. Clear statement of problem, research question and hypothesis.





## *Hypothesis (750 characters)*

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- All research proposals require hypotheses. For example even if you are doing a survey or questionnaire you must have some hypothesis as to the results
- The hypothesis section seems simple yet it is the most difficult part of any grant application.



## *Hypothesis (750 characters)*

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A good hypothesis section:

- The Background Sentence
- The “Not Known” Sentence
- The Hypothesis



## *Hypothesis (750 characters)*

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A good hypothesis section:

“Treatments with O-sialoglycoprotein endopeptidase (OSGE) in old mice have been shown to reverse age-related declines in activation and proliferation of CD4<sup>+</sup> T cells. However, it is not known whether OSGE treatments can restore B cell maturation and antibody production by enhancing late CD4<sup>+</sup> activation and expansion. We hypothesize that OSGE treatments can reverse age-related declines in antibody production in mice.”



## *Background (2500 characters)*

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Second Review Criteria: Evidence of scholarly and critical literature review

- Most student get good scores on this part.
- Put in all information you need to understand the application.
- References are critical.



## *Research Design and Methods (3500 characters)*

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- Third Review Criteria: Research design and methodology are appropriate to answer the research question/hypothesis.



# *Research Design and Methods (3500 characters)*

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- Its **Research Design** and Methods
- What are you going to do?
- How are you going to do it?
- How are you going to analyze the results?



## *Research Design and Methods (3500 characters)*

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Using computer assisted image analysis to quantify cellular proliferation in colonic crypts, we will evaluate both the whole crypt labeling index and labeling in five regions of the crypt to establish where the changes are taking place. Five well-oriented crypts will be scored for each biopsy. Staining Procedure (BioGenex Optimax Plus automated stainer following antigen retrieval). 1. Antigen Retrieval: Ki-67 in 10mM Citrate Buffer, pH 6.0, time: 12 minutes, 80% Cyclin D1 in 10mM Citrate Buffer, pH=6.3, time: 9 minutes, power: 80%. 2. Blocking Steps: Peroxide (3%) for 20 minutes; Power block (buffered casein) for 15 minutes; Protein block (serum) for 20 minutes...



*What will be the specific tasks, activities and responsibilities of the student on a daily basis (1000 characters)*

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- Fourth Review Criteria: Student role and activities are clearly defined.





*What will be the specific tasks, activities and responsibilities of the student on a daily basis (1000 characters)*

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- Students in 8 weeks can only do a component of the project –we want to know what that component is.
- What specific duties will you perform?
- Who will supervise you?



## *Fifth Review Criteria*

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- Student/mentor relationship is strong, and there is evidence of active mentoring throughout the proposal.
- Did you give your mentor adequate time to review your proposal?



## *Significance (750 characters )*

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- Significance is a key part of a grant application.
- Why are you doing the research?
- Why is it important?
- Some proposals are not funded because they lack impact.
- Write more than a sentence.



## *Summary*

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- Time is limited.
- Find a mentor. Use the mentor list on the website as a guide but in general work with who you want to work with.
- Try to give mentor time to review the application. Guide mentor as to requirements.



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If you have questions:

Ben Margolis

[bmargoli@med.umich.edu](mailto:bmargoli@med.umich.edu)

Denise Brennan

[denisebr@med.umich.edu](mailto:denisebr@med.umich.edu)