



**Mentors in Medicine & C-STAR Application**

**Resident Applicant’s Information**

Last name:

First name:

E-mail address:

Firm (check one):    A    B    C    PCIM    Neuro/Prelim

Resident Year (check one):    Intern    2<sup>nd</sup> year    3<sup>rd</sup> year

**Faculty Primary Mentor Information**

Last name:

Telephone number:

First name:

Division:

E-mail address:

Department:

If you have a secondary mentor, please complete this section:

**Faculty Secondary Mentor Information**

Name and title:

Telephone number:

Department/Division:

E-mail address:

Please refer to the website for a detailed description of the **programs** and commitments:  
<http://meded.dom.wustl.edu/education-programs.html>

You may apply for one of the following program options (check ONE box):

- Mentors in Medicine (MiM)**
- Mentors in Medicine - International (MiM-I)**
- MiM - Teaching Physician Pathway (MiM-TPP)**
- MiM and Clinical Scientist Training and Research Program (C-STAR)**
- C-STAR**



**ALL APPLICANTS:**

Please review on-line information

- MiM program: <http://ghs.wustl.edu/mim.html>
- C-STAR program: <http://ghs.wustl.edu/cstar.html>

**MiM Applicants:**

**We expect that you work closely with your mentor on your application.** We encourage you to discuss your proposed project in the early stages with the **Director (Dr. Roger Yusen)** and/or **Associate Director (Dr. Seth Eisen)** of the **MiM program**, especially if you have questions about its appropriateness for the MiM program.

**MIM-I Applicants ONLY:**

You must first review your proposal and get preliminary approval from the **Director (Dr. Caline Mattar)** of the **International Health Program**. You should allow time to meet with the Director and to address project and international program participation issues. Please identify a dyad that will be working with you on your project in the country you chose.

**MIM-TPP Applicants ONLY:**

You must first review your proposal and get preliminary approval from the **Director (Dr. Patricia Kao)** of the **Teaching Physician Program**.

**C-STAR Applicants:**

Please refer to information and instructions provided on the web site <http://ghs.wustl.edu/cstar.html>



## APPLICATION INSTRUCTIONS

Using the instructions below, complete the **project outline**, with the following format:

- **One-inch page margins**
- **Single-spaced type**
- **11-point ARIAL font**
- **Header should contain your name**
- **Footer should contain the page number**

Beginning with your project title, you have a **4-page limit for your project outline**. The **bibliography** does NOT count for the page limit.

**Use the following headings, though you may add subheadings:**

**Project Title:**

**Research Question/Hypothesis:**

Give a *one to two sentence* description of the question that your study will address. Most proposals should have a testable hypothesis, and you should clearly state this in one sentence.

**Background and Statement of Problem:**

State the importance of the problem and outline the evidence that forms the basis for the hypothesis and/or goal stated above. Include appropriate references, though we do not require an exhaustive reference list (see below). Make this section brief (e.g., <math>< \frac{1}{2}</math> page), so you can focus on the research plan and the feasibility of the project.

**Aims:**

Describe the specific aim or aim(s) of your project. Make the aims brief and specific. Make sure you propose a feasible project that you have the time and resources to complete within your proposed timeframe.

**Study Design:**

Describe your study design such as retrospective cohort study, cross-sectional cohort study, case-control study, case series, randomized controlled trial, etc. Include methodology for using controls when appropriate.

**Patients:**

Describe the study eligibility criteria. Demonstrate feasibility by describing the available patient population, the volume of procedures per month, availability of existing data, etc.

**Setting:**

Describe where you will obtain the data and conduct the research.

**Outcome Measurement:**

Define the primary and any secondary outcomes and describe how and when you will measure them.

**Interventions and or tests/procedures:**

If the project involves some type of intervention or testing, provide the relevant information.

**Data management**

Describe the type of database you will develop and what quality control measures you will use.



### **Data Analysis:**

State the main statistical tests that you will use to evaluate primary and secondary outcomes. Describe the statistical package you will use. You may wish to confer with a biostatistician or the [Research Design & Biostatistics Group \(RDBG\)](http://icts.wustl.edu/icts-researchers/icts-cores/find-services/by-core-name/research-design-biostatistics-group) found at: <http://icts.wustl.edu/icts-researchers/icts-cores/find-services/by-core-name/research-design-biostatistics-group>

### **Sample Size Estimation:**

State the effect size or the clinically meaningful change in the primary variable that you want to detect with your study. Calculate how many units (patients, wards, hospitals, animals, etc.) you will need in the study to measure such a change. We recommend that you use a two-sided  $\alpha=0.05$  and  $\beta=0.20$  (80% power). You may wish to confer with a biostatistician or the [Research Design & Biostatistics Group \(RDBG\)](http://icts.wustl.edu/icts-researchers/icts-cores/find-services/by-core-name/research-design-biostatistics-group).

### **Project Roles:**

Please state your specific role(s) on this project. Clarify the roles of the mentor(s) and anyone else involved with the project. If you have multiple mentors for this project, state the role(s) of each mentor. State who designed the study, who will develop the manual of operations, the data collection tool(s)/database, who will collect the data, who will analyze the data.

State the authorship plans for you and your mentor. We typically expect that you will be the **primary person** working on the proposed project and that you will be the **first author** on the project manuscript.

For **overlapping proposals** that include two house-staff applicants, from the same or different application cycle(s), the applicants should identify the proposal overlap and clearly delineate their non-overlapping and overlapping responsibilities and roles. The MiM program expects each applicant to have a somewhat unique proposal that aims to produce a first author publication for each applicant, though we encourage co-authorship (when appropriate) on each other's publications. Applicants may have overlap in their proposals in terms of shared workload, and distribution of duties might be acceptable. Ideally, proposals would stand alone. Despite the benefits of shared workload, dependent overlapping proposals may implode if one part of the project does not come to fruition. Thus, we strongly encourage applicants of overlapping proposals to contact the MiM Director prior to application submission to preemptively address potential application reviewer concerns.

### **Timeline:**

Provide a **table or figure** that shows the timeline for the project, from researching the literature, designing the study, submitting to the Washington University Human Research Protection Office (**HRPO**)/Institutional Review Board (**IRB**), developing the manual of operations, creating a data entry system/database, collecting the data, analyzing the data, developing an abstract, submitting a manuscript, etc. Please set **realistic goals**. For **international research**, make sure you address IRB issues pertinent to the site of your research.

### **Human subjects:**

For studies that involve active participation by human subjects, describe the relevant information related to patient consent and safety.

### **Research conduct:**

Confirm that you did or will complete **CITI training**: <https://hrpo.wustl.edu/education/human-subjects-education/>. State whether you have any potential conflicts of interest (**COI**). If you do have any COI, please describe them.



**THE SECTIONS BELOW DO NOT COUNT AS PART OF YOUR 4-PAGE LIMIT:**

**BUDGET ESTIMATE AND BUDGET JUSTIFICATION:**

Using the **BUDGET TEMPLATE FORM**, provide an estimated budget for data collection, statistical support, patient participation and supplies. You may budget travel to one domestic scientific meeting to present your study results (poster/oral presentation). Provide specific budget items and a justification for each one (see **BUDGET GUIDELINE DOCUMENT**).

**REFERENCES:**

List any pertinent references to support the background and design of your proposal. We do not require an exhaustive list. However, you should include the most important references to demonstrate your knowledge of the topic.

**MENTOR LETTER AND CV:**

You should begin discussing the proposed project with your mentor many weeks ahead of the application submission date. You should inform your mentor that you must obtain a letter of support from him/her. Your mentor may write a brief letter, but it should indicate that he/she has **read and critiqued your proposal**, and that he/she **supports the project**. The letter should describe any **support that the mentor will provide** for the conduct of the study, such as data, supplies, funding, and/or personnel (e.g. research assistant, laboratory technician, or biostatistical consultation). The letter should clearly describe the **mentor's role** in the project and his/her **commitment** to having at least two meetings per month, ( $\geq 1$  face-to-face meeting per month); C-STAR residents require weekly face-to-face meetings. The mentor should also describe his/her **ability and experience related to mentoring research projects**. The mentor should also describe his/her **expertise related to the topic your project will address**. The mentor should confirm that he/she **supports your plan to submit a first-author manuscript**.

We require that you **INCLUDE EACH MENTOR'S CV (OR NIH BIOSKETCH)**; maximum of 4 pages) with your application. You have the responsibility of obtaining this from your mentor.

**APPLICANT CV:**

Please attach your updated **CV (maximum of 2 pages)** that describes your education, training, and scholarly activity. Make sure to provide a chronological list of your research experiences. Provide a complete list of your published or submitted scientific manuscripts and other important scholarly works. If you have published/submitted manuscripts and presented abstracts (exclude abstracts not accepted/presented), please list in separate sections of your CV.

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If you have any questions or need assistance in preparation, contact Matthew Heaton, the MiM Program & C-STAR Coordinator, at [m.heaton@wustl.edu](mailto:m.heaton@wustl.edu) or 314-362-8138. Please submit your MiM application and additional information/attachments by e-mail to [mim@dom.wustl.edu](mailto:mim@dom.wustl.edu). If applying to C-STAR, submit your application to [C-STAR@dom.wustl.edu](mailto:C-STAR@dom.wustl.edu). You will receive a confirmation email that we received your application.