# B. BACKGROUND AND GOALS FOR FELLOWSHIP TRAINING (six page limit)

## B1. Doctoral Dissertation and Research Experience

Briefly summarize your past research experience, results, and conclusions, and describe how that experience relates to the proposed fellowship. In some cases, a proposed fellowship may build directly on previous research experiences, results, and conclusions. In other situations, past research experiences may lead a candidate to apply for a fellowship in a new or different area of research. Do not list academic courses in this section.

Applicants with no research experience: Describe any other scientific experiences.

Advanced graduate students (i.e., those who have or will have completed their comprehensive examinations by the time of award): Include a narrative of your planned doctoral dissertation (may be preliminary).

Postdoctoral fellowship applicants: Specify which areas of your proposed research were part of your predoctoral thesis or dissertation and which, if any, were part of a previous postdoctoral project.

## B2. Training Goals and Objectives

Describe your overall training goals for the duration of the fellowship and how the proposed fellowship will enable the attainment of these goals.

Identify the skills, theories, conceptual approaches, etc. to be learned or enhanced during the award.

Discuss how the proposed research will facilitate your transition to the next career stage, if applicable.

## B3. Activities Planned

The activities planned under this award should be individually tailored and well-integrated with your research project.

Describe, by year, the activities (research, coursework, professional development, clinical activities, etc.) you will be involved in during the proposed award. Estimate the percentage of time to be devoted to each activity. The percentage should total 100 for each year.

Describe the research skills and techniques that you intend to learn during the award period.

Provide a timeline detailing the proposed research training, professional development, and clinical activities for the duration of the fellowship award. Detailed timelines of research activities involving animals, human subjects, or clinical trials are requested in other sections of the fellowship application and should not be included here. The timeline you provide here should be distinct from the Study Timeline in the PHS Human Subjects and Clinical Trials Information form.

If provided this NRSA award, my research training will consist of formal training, mentored research, and clinical efforts to prepare me for an early career development award as a translational researcher. This training grant will provide funding for two additional research years between July 2020 and June 2022. The detailed activities that I will undertake during these two years are provided in **Table 1**. This training grant will provide funds for advanced coursework in epidemiology and biostatistics at the Rollins School of Public Health to supplement my Master of Science in Clinical Research degree. The selected coursework will enhance my understanding in advanced epidemiologic methods (EPI 538, EPI 545) and advanced longitudinal data analysis (BIOS 526, BIOS 731, BIOS 534). This will complement and strengthen my computational training, allowing me gain in-depth knowledge and skills in study design, advanced statistical modeling, and data interpretation. Additionally, as part of my research training I will attend biweekly epidemiology grand rounds, weekly cardiovascular grand rounds, and weekly medicine grand rounds. Under the guidance of my advisor Dr. Park, an expert in this field, I will study autonomic physiology through directed reading and interpretation of clinical science through weekly lab meetings. The proposed research will be presented at two national conferences yearly. The proposed research will be completed over the two years, during which approximately two-thirds of my time will be devoted to completing this project, presenting at national meetings, and preparing manuscripts. I will attend weekly lab meetings with my primary sponsor, Dr. Vaccarino, and my co-sponsors Dr. Shah and Dr. Alonso. Additionally, I will maintain my clinical skills through 2-4 days of medicine wards per month.

Table 1. Detailed Effort for Activities Planned Under this Award

|  |  |  |
| --- | --- | --- |
| **Tasks** | Year 1 (% Effort) | Year 2 (% Effort) |
| Formal Training Plan |  |  |
| Formal Course Work (credit hours) |  |  |
| EPI 538 Advanced Epidemiological Methods I (2) | 5% |  |
| EPI 545 Advanced Epidemiological Methods II (4) |  | 12% |
| BIOS 526 Modern Regression Analysis (3) | 8% |  |
| BIOS 731 Advanced Statistical Computing (2) | 5% |  |
| BIOS 534 Machine Learning (3) |  | 8% |
| GAH 601 the Responsible Conduct of Research Ethics (1) | 1% | 1% |
| Didactic Lectures and Journal Clubs (weekly) |  |  |
| Epidemiology Grand Rounds (biweekly) | 1% | 1% |
| Emory Heart and Vascular Grand Rounds (weekly) | 2% | 2% |
| Emory Department of Medicine Grand Rounds (weekly) | 2% | 2% |
| EPICORE Research-in-Progress Meetings (weekly) | 1% | 1% |
| Directed Reading in Autonomic Physiology (weekly) | 2% | 2% |
| National Conferences (two per year, three days each) |  |  |
| American Heart Association | 1% |  |
| Translational Science |  | 1% |
| American Heart Association Epidemiology | 1% |  |
| Computing in Cardiology |  | 1% |
| Total Training Effort | 29% | 31% |
| Research Plan |  |  |
| Specific Aim #1 |  |  |
| Parent study (Emory Biobank) data collection | 5% |  |
| Derive markers from ECG signals (for all aims) | 5% |  |
| Analysis of depressive symptoms with HRV | 10% |  |
| Conference presentation and manuscript publication | 5% | 10% |
| Specific Aim #2 |  |  |
| Emory Biobank data collection | 5% |  |
| Derive exploratory coronary angiography variables | 5% |  |
| Analysis of coronary angiography with HRV | 10% |  |
| Conference presentation and manuscript publication | 5% | 10% |
| Specific Aim #3 |  |  |
| Collect outcomes from Biobank patients | 2% | 5% |
| Data adjudication and analysis |  | 10% |
| Conference presentation and manuscript publication |  | 5% |
| Research Training |  |  |
| Mentor meetings | 5% | 5% |
| Exploratory analyses of ECG markers | 2% | 2% |
| K23 grant application or equivalent | 5% | 15% |
| Total Research Effort | 64% | 62% |
| Clinical Effort |  |  |
| Inpatient General Medicine Service | 5% | 5% |
| Medical student, intern, and resident teaching | 2% | 2% |
| Total Training, Research, and Clinical Effort | 100% | 100% |