

Winter 2014 - SouthWest Affiliate Undergraduate Student Research Program

Application Deadline: Jan. 24, 2014

Award Activation: June 1, 2014

Program Description, Eligibility and Peer Review Criteria

Success Rate

Objectives

The purpose of this undergraduate research training program is to encourage promising students from all disciplines, including women and members of minority groups underrepresented in the sciences, to consider research careers while supporting the highest quality scientific investigation broadly related to cardiovascular disease and stroke.

Science Focus

Funding is available for research broadly related to cardiovascular function and disease, stroke, or to related clinical, basic science, and public health problems. Candidates should be interested in basic, epidemiological and/or clinical disciplines that bear on cardiovascular and stroke problems. The extent to which the focus of the project is related to CVD and/or stroke is an important factor that will be considered. However, the applicant is not required to be a part of cardiovascular/stroke-oriented laboratory, clinic or department.

The laboratory/research site sponsor and institution are responsible for disclosing the nature of research and activities taking place where the student will be conducting research, and the safety or health-hazards/risks which are known or reasonably likely to be encountered. Students are responsible for learning and following appropriate safety procedures.

Students will not receive college credit for their summer research activities. Therefore, participation in the program will not appear on an official transcript from the institution where the student is assigned.

Target Audience

At the *time of application*, the undergraduate student must:

- be enrolled full-time in an undergraduate degree program in either a four-year college or university, or a two year institution with plans to transfer to a four-year college or university by the fall semester immediately following the summer program.
- have junior or senior academic status in the fall of given year. Students who will graduate in September or before are not eligible.

- have completed at least four semesters or six quarters of any combination of the following courses by May, preceding the summer fellowship; Biological sciences (biology, biochemistry, molecular biology, cell biology, physiology or lab) and/or Physics and/or Chemistry (inorganic chemistry, organic chemistry or lab).
- have completed at least one quarter of college level or AP credit calculus, statistics, computational methods or computer science by May, preceding the summer fellowship.

Citizenship

At the *time of application*, must have one of the following designations:

- U.S. citizen
- Permanent resident
- Pending permanent resident. Applicants must have applied for permanent residency and have filed form I-485 with the U.S. Citizenship and Immigration Services and have received authorization to legally remain in the United States (having filed an Application for Employment Form I-765).
- J-1 Visa -- exchange visitor
- E-3 Visa -- specialty occupation worker
- H1-B Visa -- temporary worker in a specialty occupation
- TN Visa - NAFTA professional
- O-1 Visa - temporary worker with extraordinary abilities in the sciences
- F-1 Visa - student visa

Awardees must meet American Heart Association citizenship criteria throughout the duration of the award.

Applicants are not required to reside in the United States for any period of time before applying for American Heart Association funding.

Program Structure

The students and sponsors apply as a team and are responsible for submitting the application.

Location of Work

The award may be completed at any accredited institution in Arkansas, Colorado, New Mexico, Oklahoma, Texas, or Wyoming. Students may either be attending an institution within the affiliate, or be a resident of one of these states.

American Heart Association research awards are limited to non-profit institutions, including: medical, osteopathic and dental schools, veterinary schools, schools of public health, pharmacy schools, nursing schools, universities and colleges, public and voluntary hospitals and others that can demonstrate the ability to conduct the proposed research.

Applications will not be accepted for work with funding to be administered through any federal institution or work to be performed by a federal employee, except for Veterans Administrations employees.

Funding is prohibited for awards at non-U.S. institutions.

Budget/Annual Award Amount

Trainee Stipend/Salary: \$4,000 for the summer research experience (\$400/per week)

Payment will be made to the institution for disbursement to the fellow. Faculty mentor and institution assume fiscal responsibility. The institution may supplement the award amount. The award is for educational purposes and does not constitute an employee-employer relationship between the student and the American Heart Association.

Direct use of award funds to pay tuition is prohibited. The AHA will not pay dependent allowances.

Students accepted into the program are responsible for arranging housing and transportation.

Because the student receives only a stipend from these awards, additional research support for the proposed project must come from the institution or sponsor's laboratory. The availability of additional funds should be clearly described by the sponsor.

The student and the supervisor will determine the number of hours and days the student will spend at the research site. The student is expected to devote full-time effort (40 hours per week) for a minimum of 10 weeks to research activities.

Duration: 10 weeks minimum (commences in June)

Total Award Amount: \$4,000

Peer Review Criteria

Because the fellow receives only a stipend from these awards, additional research support for the proposed project **MUST** come from the institution or sponsor's laboratory. The availability of additional funds should be clearly described by the sponsor.

To judge the merit of the applicant for the award, reviewers must comment on the following criteria. Please be sure to address these in your proposal. Each criterion will account for 1/3 of the overall score. Student (1/3), Sponsor and Environment (1/3) and Project (1/3).

Evaluation of the Student

1. Does the student have potential for a research career? If the student has prior research experience, how will they benefit from the summer research program (ex.: new techniques learned)?
2. Is this supported by the student's academic record and the assessment provided by the letters of reference?
3. How well-rounded are the student's interests?
4. Has the student augmented his/her school work with extracurricular activities related to his/her school work?
5. How well-formed are the student's career objectives? How does the summer research program contribute to these objectives?

6. Will this program provide the student with his/her first exposure to research? If the student has already had a research experience, discuss how this will be augmented with the requested program.
7. Are there special circumstances, ethnic, financial, physical or social, that require special consideration?
8. If applying as a student/sponsor team, what is the sponsor's assessment of the applicant?

Evaluation of the Sponsor and Environment

1. Is the sponsor an independent investigator?
2. Does the sponsor have the experience to direct the proposed research training, as evidenced by their track record regarding productivity, funding and prior trainees?
3. Does the sponsor have adequate current funding to support the student's work?
4. Does the sponsor provide a comprehensive training plan that will facilitate the student's progress towards his/her research career goals?
5. What is the level of commitment of the sponsor towards the development of the student? How involved will the sponsor be in the daily supervision of the student?
6. Are appropriate plans in place to orient the student to the laboratory or research site?

Evaluation of the Environment

1. Does the scientific environment in which the work will be done contribute to the probability of success for the training experience?
2. Is there evidence of institutional commitment?

Evaluation of the Project Description

1. **Significance:** Does this project address an important problem broadly related to cardiovascular disease or stroke? Is there a clear rationale for the project? What is the likelihood that the research will result in a presentation or publication including the student?
2. **Approach:** Is the proposed approach appropriate to accomplish the stated research goal(s)? Are the student's role and responsibilities clearly defined? Are there additional educational aspects of the summer program that the student will benefit from (e.g., participation in journal clubs, observation at research meetings, clinical rounds, etc.)?

Applicants should never contact reviewers regarding their applications. Discussing scientific content of an application or attempting to influence review outcome will constitute a conflict of interest in the review. Reviewers must notify the AHA if an applicant contacts them.

Restrictions

- The fellow cannot hold a comparable award as a source of supplementation.
- An applicant may submit only one affiliate application per deadline.

- No lab can have more than two AHA undergraduate awardees.
- An applicant who is unsuccessful in a competition may resubmit the same or similar application two times (the original plus one [resubmission](#)). The same or similar application submitted for the third time will be administratively withdrawn.

LIST OF POTENTIAL SPONSORS AND LABS

| STATE | INSTITUTION & CONTACT | AREA OF STUDY |
|----------|---|---|
| ARKANSAS | University of Arkansas for Medical Sciences Steven Post, PhD Phone: (501) 526-6046 Email: spost@uams.edu | |
| | University of Arkansas for Medical Sciences Leanne L. Lefler, PhD, ACNS-BC, APN Phone: 501-296-1939 Email: LeflerLeanne@uams.edu | <p>Much of Dr. Lefler's work has focused on beliefs (and other variables) that facilitate or hinder adherence to CHD risk factor modification in older women with and without diagnosed CHD. She has conducted both quantitative and qualitative studies and worked in the church community and primary care environments. Her currently funded (NIH/NINR) study is a randomized controlled trial testing a theoretically-derived behavioral intervention to increase daily lifestyle physical activity of sedentary older women to reduce their coronary heart disease risks and improve overall health. If we could increase physical activity in our rapidly growing older population—even modestly, we could make a significant impact to the health of our nation. http://nursing.uams.edu/research/faculty-research-interests/</p> |
| | University of Arkansas for Medical Sciences Seongkum Heo, PhD, RN Email: SHeo@uams.edu | |
| COLORADO | Colorado State University | |

| | | |
|-------------------|--|---|
| | <p>Jeffrey Wilusz, PhD Phone: (970) 491-0652 Fax : (970) 491-1815 Email: jeffrey.wilusz@colostate.edu</p> | |
| | <p>University Colorado, Denver Karen S. Moulton, MD Phone: (303) 724-5443 Email: Karen.moulton@ucdenver.edu</p> | |
| NEW MEXICO | <p>University of New Mexico Laura Gonzalez Bosc , PhD Phone: (505) 272-5556 lgonzalezbosc@salud.unm.edu</p> | <p>http://cbp.unm.edu/faculty_pages/gonzalezbosc/index.html</p> |
| | <p>University of New Mexico Nikki Jernigan, PhD Office: (505) 925-4493 Lab: 505-272-0622 njernigan@salud.unm.edu</p> | <p>Dr. Jernigan's laboratory studies the physiology and pathophysiology of the pulmonary vasculature. In particular, her team is interested in alterations of vascular smooth muscle calcium handling and signal transduction that occur with pulmonary hypertension. Her current focus is on an unique class of voltage-insensitive, non-selective cation channels, epithelial sodium channels (ENaC) and acid sensing ion channel (ASIC). Research Description: (also available on website) http://cbp.unm.edu/faculty_pages/jernigan/index.html</p> |
| | <p>University of New Mexico Thomas C. Resta, PhD Phone: (505) 272-8822 Fax: (505) 272-6649 Email: tresta@salud.unm.edu</p> | <p>Dr. Resta directs a research program focusing on vascular smooth muscle signaling pathways and the genesis of chronic hypoxia- and intermittent hypoxia-induced pulmonary hypertension, conditions associated with chronic obstructive lung diseases, sleep apnea, and high altitude exposure. He has developed state of the art approaches to investigate the mechanisms of vascular smooth muscle calcium sensitization in these models of pulmonary hypertension, and role of reactive oxygen species in this process.</p> |

| | | |
|-----------------|---|---|
| | | http://cbp.unm.edu/faculty_pages/resta/index.html Other potential sponsors can be found at the following links. http://cbp.unm.edu/faculty_pages/kanagy/index.html |
| | University of New Mexico Benjimen R. Walker, PhD Phone:(505)272-0619 bwalker@salud.unm.edu | http://cbp.unm.edu/faculty_pages/walker/index.html |
| OKLAHOMA | University of Oklahoma Health Sciences Madeleine W. Cunningham, Ph.D. Tel 405-271-3128 Lab 405-271-2133 X47455 email: madeleine-cunningham@ouhsc.edu | Dr. Cunningham's projects involve the immunology of myocarditis, cardiomyopathy and subsequent heart failure in humans. We are involved in immunoprofiling of cellular and humoral responses during inflammatory heart disease. In addition, our laboratory has a long history of investigation of rheumatic heart disease and related autoimmune sequelae from group A streptococcal infections. Streptococcal sequelae lead to an overreactive adaptive and innate immune system which can attack the heart and the brain following streptococcal infections. |
| | Oklahoma State University Myron Hinsdale, DVM, PhD Phone: (405) 744-8107 Email: myron.hinsdale@okstate.edu | Dr. Hinsdale's laboratory is interested in the effects of extracellular matrix on cellular function. For the American Heart Association summer student research program he has several projects that focus on the role that the extracellular matrix has on endothelial cell function and vascular smooth muscle cell function in injury-repair processes. http://www3.cvhs.okstate.edu/profiles/DisplayProfile.asp?RecordID=766 |
| | University of Oklahoma Health Sciences Zhongjie Sun, MD, PhD, FAHA Phone: (405) 271-2226 x 56237 Fax: (405) 271-3181 Email. zhongjie-sun@ouhsc.edu | |

TEXAS

Baylor College of
Medicine

James F. Martin, MD

Email: jfmartin@Bcm.edu

[u](#)