Winter 2014 - Western States 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 considered. However, the applicant is not required to be a part of cardiovascular/stroke-oriented laboratory, clinic or department.

Projects students work on range from basic molecular research to direct physiological studies to clinical studies. Examples include signal transduction, gene expression, vascular wall biology, ion transport, cellular physiology, treatment effectiveness, and biomarkers in CVD/stroke prediction.

The laboratory sponsor and institution are responsible for disclosing the nature of research and activities taking place in the laboratory 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 in the laboratory.

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*, 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.

- either be attending an institution within the affiliate, or be a resident of Alaska, Arizona, California, Hawaii, Idaho, Montana, Nevada, Oregon, Utah or Washington.

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 Summer Undergraduate Research Fellowship is structured by the funding research committee as an award in which the students and sponsors apply as a team and are responsible for submitting the application together.

Before applying, the student will need to secure a sponsor and connect with the institution's grants officer. Once the student has an agreement from the sponsor, then both the student and sponsor can submit the application.

Applicants may find and apply with any eligible lab within Alaska, Arizona, California, Hawaii, Idaho, Montana, Nevada, Oregon, Utah or Washington.

Applicants are not limited to working with the labs on the posted list, but are welcome to find any lab that is eligible.

Location of Work

The award may be completed at any accredited institution in Alaska, Arizona, California, Hawaii, Idaho, Montana, Nevada, Oregon, Utah or Washington. Applicants are not required to be a resident of the state where the research is being conducted.

Typically, labs are located in medical schools or major non-profit research institutions that conduct cardiovascular and/or cerebrovascular-related research.

Budget/Annual Award Amount

Trainee Stipend/Salary: $6,000 for the summer research experience

Payment will be made to the institution for disbursement to the fellow. Faculty sponsor 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 sponsor's laboratory. The availability of additional funds should be clearly described by the sponsor.

Project Support: $500 per awardee

Project support funds may be used for supplies, publications, and/or other expenses associated with the student's research experience (e.g. weekly meetings for students and sponsors, roundtable or poster sessions, etc.).

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

Duration: 10 weeks minimum (commences in June).

Total Award Amount: $6,500

Program Requirement
Awardee is required to give an oral presentation at the conclusion of his/her research experience at a roundtable discussion meeting as scheduled by the institution. The oral presentation serves as the capstone session for the program and, therefore, is a mandatory requirement for program completion. Only in exceptional circumstances will this requirement be waived.

Roundtables

What is this a Roundtable Discussion?

In August, towards the end of the summer program, Awardees present their summer work to an audience of their peers. Essentially, roundtables serve as the capstone course for the student's summer research experience.
More . . .

Peer Review Criteria
Selection is based on an assessment of the student's application, academic record, and faculty recommendation forms. Preference is given to students with superior academic standing.

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

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 (i.e., new techniques learned)?

1. Is this supported by the student's academic record and the assessment provided by the letters of reference?
2. How well-rounded are the student's interests?
3. Has the student augmented his/her school work with extracurricular activities related to his/her school work?
4. How well-formed are the student's career objectives? How does the summer research program contribute to these objectives?
5. 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.
6. Are there special circumstances, ethnic, financial, physical or social, that require special consideration?
7. If applying as a student/sponsor team, what is the sponsor's assessment of the applicant?
8. Is the student willing to attend and participate in oral presentations/roundtables scheduled by the institution/sponsor? Is the student interested in promoting the Student Research Program? The student may be called upon by the American Heart Association where they work, live, or go to school to speak at meetings or to become involved in local activities.

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. 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?
5. Are appropriate plans in place to orient the student to the laboratory – Is a Training Plan described to teach the student specific research skills?
6. Is the sponsor willing to provide the opportunity for students to give oral presentations at the conclusion of his/her research experience at a roundtable discussion meeting? The oral presentations provide the students with the opportunity to discuss their projects with other students and supervisors. Discussion serves as the capstone session for the program.

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 (i.e. participation in journal clubs, observation at research meetings, clinical rounds, etc.)?

Restrictions

- The student 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 three AHA undergraduate awardees.
- The AHA undergraduate research training program is a full-time endeavor for the student. For this reason, students are not permitted to take MCAT classes while enrolled in the program.
- An applicant who is unsuccessful in a competition may resubmit the same or similar application three times (the original plus two resubmissions). The same or similar application submitted for the fourth time will be administratively withdrawn

Selection Process and Notification

The applications are submitted by the undergraduate applicant and his/her grants officer through Grants@Heart, then

assigned to the Student Peer Review Committee. After receiving the peer review results and deciding which applications to fund, the research committee notifies the applicant and sponsor of the awarded research.

Successful applicants, sponsors and lab will be notified by e-mail.

List of Potential Labs

Bay Area

INSTITUTION	CONTACT INFORMATION
Stanford	Fredric B. Kraemer, M.D. - fbk@stanford.ed Suzanne Pfeffer, Ph.D. - pfeffer@stanford.edu Thomas Quertermous, M.D. - tomq1@stanford.edu Marlene Rabinovitch, M.D. - marlener@stanford.edu Joseph C. Wu, MD, PhD- joewu@stanford.edu Phillip C. Yang, M.D. - phillip@stanford.edu

Greater Bay Area

UC Davis	Nipavan Chiamvimonvat, M.D. - nchiamvimonvat@ucdavis.edu Javier E. Lopez, M.D. - Jlopez@ucdavis.edu

Irvine, **California**

UC Irvine	John C. Longhurst, M.D., Ph.D. - jcl@uci.edu Stephanie Tjen-A-Looi, MS, PhD- stjenalo@uci.edu

Logan, Utah

Utah State University	Joanie M. Hevel, Ph.D - joanie.hevel@usu.edu Edwin Antony, Ph.D. - edwin.antony@usu.edu Nickolas E. Dickenson (Nick) - nick.dickenson@okstate.edu Sean Johnson, Ph.D. - sean.johnson@usu.edu

Salt Lake City, Utah

University of Utah	Peter J. Gruber, M.D., PhD.- Peter.gruber@hsc.utah.edu

	C. Jerry Jou, D.O. Ph.D. - Chuanchau.Jou@imail.org J. David Symons, Ph.D.- J.David.Symons@hsc.utah.edu Alexey Zaitsev, PhD - zaitsev@cvrti.utah.edu Namakkal S. Rajasekaran, PhD - raj.soorappan@hsc.utah.edu

San Diego, California

Stanford-Burnham	Rolf Bodmer, Ph.D. - rolf@burnham.org
UC San Diego	Joan Heller Brown, Ph.D. - jhbrown@ucsd.edu Michael H. Criqui, M.D., MPH - mcriqui@ucsd.edu Matthew A. Allison, M.D., M.P.H. – malison@ucsd.edu Cheryl A. M. Anderson, PhD, MPH, MS - canderson@ucsd.edu Joachim H. Ix, MD, MAS – Jix@ucsd.edu Dena E. Rifkin, M.D. M.S. – drifkin@ucsd.edu Jeff Omens, Ph.D. - jomens@ucsd.edu Hemal H. Patel, Ph.D. - hepatel@ucsd.edu Deborah Yelon, PhD - dyelon@ucsd.edu

San Francisco, California

UC, San Francisco	Jeffrey Olgin, M.D. olgin@medicine.ucsf.edu Zena Vexler, Ph.D. - Zena.Vexler@ucsf.edu
San Francisco VA Medical Center	Elaine Tseng, MD- Elaine.Tseng@ucsfmedctr.org

Southern California

Loma Linda University School of Medicine	William J. Pearce, Ph.D.-wpearce@llu.edu
Western University of Health Sciences	Fadi Khasawneh, B.Pharm., Ph.D. - fkhasawneh@westernu.edu

Oregon, Idaho, Washington

Oregon Health & Science University	Monica Hinds, Ph.Dm - hindsm@ohsu.edu Owen McCarty, Ph.D. - mccartyo@ohsu.edu

University of Washington	Michael Regnier, Ph.D. - mregnier@u.washington.edu David Dichek, M.D. - ddichek@u.washington.edu