



*RISE, College of Science S-STEM, LSAMP and Sci 1  
2014 Report*



## SJSU RISE Program (2008 – 2017)

The SJSU RISE Program is funded by the National Institutes of Health. The program was funded in 2008 for four years (\$ 1,666,454) and a competitive renewal was awarded for an additional five years (2012 – 2017, \$ 2,270,158). The RISE program's main goals are to increase the graduation rate of underrepresented minority students (URM) in the biomedical STEM fields and to strongly encourage these students to continue to PhD degrees and biomedical research careers. RISE students get paid an hourly wage to perform research with SJSU faculty. RISE students must be undergraduate URM students, US Citizens or legal residents with declared majors in a biomedical field and must maintain a GPA above a 2.8. RISE also provides funding for support activities for these students which benefit many other SJSU students. Other activities partially or completely funded by RISE include:

a) Summer Chem 1A Preparation Course – Two week free course open to all SJSU students planning on taking Chem 1A. LSAMP provides support for a textbook for URM STEM students who participate in this activity. **Students who consistently attend this preparation course have an 88% passing rate in Chem 1A.**

b) Math Summer Intensive for Pre-Calculus – Three week pre-calculus introduction for incoming URM freshman. Stipend for the students and materials are paid by LSAMP. This serves as a feeder of incoming students to RISE, LSAMP and S-STEM.

c) Sci 1 – Academic Excellence Workshops – Collaborative peer led workshops taught by student facilitators that generate FTES for SJSU. Additional information about Sci 1 is attached including data on the success of facilitators.

d) Research Techniques Workshops – Hands on workshops taught by SJSU faculty to help students learn and obtain hands on experience with other research techniques relevant to the biomedical fields (safe use of radioisotopes, HPLC, cloning, etc.)

### RISE Student Demographics

Number of SJSU RISE students (up to 5/31/2014) – 60

Gender – 48% female

Ethnicity – 75% Hispanic

Race – 22% African American, 3% Pacific Islander, 8% Native American

Major – 50% Biology, 28% Engineering, 22% Chemistry

### Results

Number of students who completed or are active in the program – 55; an additional 5 resigned or were removed due to change in educational goals or poor grade performance, and most continued to be mentored by Dr. Singmaster

Graduation/retention rate – **100% all students who completed the program have either graduated with a STEM degree or are still enrolled at SJSU in a STEM degree program.** Note that some of these students started after the end of their freshman year so they were “captured” early. The students who resigned or were removed also all have graduated or have been retained in STEM majors with the exception of one student who left because of personal issues. Thus the overall graduation/retention rate, including students who resigned from the program, is 98%.

Continuation to advanced degree programs – One student is currently in an MD/PhD program; ten students started and some have already completed MS programs in STEM; sixteen students have started or will be starting STEM PhD programs. List included at the end of this report.

Awards – Five former RISE students have secured NSF Graduate Research Fellowships, one has secured a Ford Foundation Dissertation Fellowship and one a CSU Doctoral Incentive Loan Award.

**SJSU S-STEM Programs in the College of Science**  
Scholars in Science (2009 – 2013)  
College of Science Research and Teaching Scholars (2013-17)

The College of Science S-STEM program is funded by the National Science Foundation. For the first four years the program was called Scholars in Science (2009-13, \$600 K direct costs). A second grant was secured (2013-17, \$600 K direct costs) and titled College of Science Research and Teaching Scholars. The goal of this program is to provide scholarships to students with documented financial need. These students must either continue to advanced degrees in STEM, high school STEM teaching careers or careers as scientists. S-STEM students must be undergraduate students, US Citizens or legal residents with declared majors in biology, chemistry, physics, geology or meteorology and must maintain a GPA above a 2.7. The maximum amount of funding a student can receive is \$5,000 per semester.

**S-STEM Student Demographics**

Number of SJSU S-STEM students (up to 5/31/2014) – 57

Gender – 42% female

Ethnicity – 19% Hispanic

Race – 12% African American, 28% Asian, 2% Native American

Major – 42% Biology, 35% Chemistry, 4% Geology, 14 % Meteorology, 5% Physics

**Results**

Number of students who completed or are active in the program – 53; three resigned or were removed due to change in educational goals or poor grade performance, one no longer had financial need.

Graduation/retention rate – **100% all students who completed the program have either graduated with a STEM degree or are still enrolled at SJSU in a STEM degree program.** The students who resigned or were removed, also all have graduated or have been retained in STEM majors with the exception of one student who left because of personal issues.

Continuation to advanced degree programs – Seventeen students have started or will be starting STEM PhD programs and nine have started STEM MS programs. So far only one has started a STEM teaching credential program. List of students and schools included at the end of this report.

Awards – So far three former S-STEM students have secured NSF Graduate Research Fellowships.

## **SJSU Louis Stokes Alliance for Minority Participation (LSAMP)** (1994 - 2018)

The LSAMP Program is a CSU system wide program managed by CSU Sacramento. The program is funded by the National Science Foundation and with support from the CSU. In any given year about 250 URM science and engineering majors are registered as LSAMP students at San Jose State University. Although SJSU ranks 10<sup>th</sup> in total African American enrollment and in total Hispanic student enrollment out of all the CSU campuses, SJSU's program is the fourth largest LSAMP program in the CSU system and is growing. SJSU receives \$70,000 per year from CSU Sacramento to fund the program. The goals of the LSAMP program are: (1) to improve retention and progression of underrepresented minority (URM) students in science, technology and engineering majors (STEM); (2) to increase the number of URM-STEM baccalaureate degrees awarded; (3) to enhance graduate school preparedness of upper division students and improve aggregate student progression to STEM graduate programs; and (4) to broaden participation of LSAMP students in graduate study through "Bridges to the Doctorate" supplemental activities at the Alliance's graduate institutional sites. Items 3) and 4) were not part of the CSU LSAMP mission until 2008.

LSAMP students receive stipends for participating in research, the Graduate School Preparation Seminar, the Summer Pre-Calculus Workshop and the Diversity Forum. Research active students can also be funded to attend a conference. In addition, students can obtain small stipends to serve as textbook support and to cover the cost of the GRE test and graduate school applications.

### **SJSU LSAMP Student Demographics**

Gender - 38% female                      Ethnicity - 69% Hispanic  
Race – 28% African American, 3% Native American/Pacific Islander  
Major – 61% Engineering, 39% Science

### **Results**

Because of the large number of students it is very difficult for SJSU LSAMP to track all its students. CSU Sacramento tracks the full CSU cohort and reports data to NSF and the Chancellor's Office. A full report can be found at [http://www.csus.edu/csu-lsamp/Project%20Evaluation\\_ISR.pdf](http://www.csus.edu/csu-lsamp/Project%20Evaluation_ISR.pdf) for 1994 to 2011. A portion of the executive summary is included below.

- Participants were 1.3-1.9 times more likely than nonparticipants to remain enrolled in STEM disciplines
- Participants were 2.1 times more likely than nonparticipants to graduate with STEM degrees
- 55% of participants were awarded a bachelors degree, and more than two-thirds of these degrees were in STEM disciplines
- 37% of Phase III graduates (2003-08) persisted at the post-baccalaureate level; 21% of these participants earned master's degrees, 3% earned doctorates, and 76% remain enrolled

## Sci 1 - Academic Excellence Workshops (2000 – current)

The Academic Excellence Workshops are peer led, collaborative learning activities associated with selected gateway courses for STEM degrees. The workshop helps students set aside time for problem solving in a more structured environment allowing a student to stay up to date with their STEM class in a supportive atmosphere. Funding for the workshops was originally from LSAMP and NIH MARC Programs. Reductions in NIH MARC funding have resulted in Sci 1 being funded solely by the RISE Program. A request was submitted for OP Funds for 2014/15 to help support some of the Sci 1 workshops. Because of the limited resources the workshop are voluntary, students are strongly encouraged but not required to sign up for Sci 1. The benefits of Sci 1 are listed below.

**To SJSU** – Low to no cost FTES because the instruction and management of the workshops has been paid by grants for many years. This is also a high impact educational practice (AAC&U 2007, Kuh).

**To Students in Sci 1** - Organized, peer led workshop aimed at helping students pass Chem 1A/B, Chem 112A/B, Biol 1B, Chem 135, Biol 115, etc. Higher grades and higher passing rates in gateway courses.

**To Faculty** - Better prepared students, less traffic during office hours, better passing rates.

**To Workshop Facilitators** - Grant employees over 20 STEM undergraduate students every semester to facilitate the workshops. **Our facilitators have a 97% graduation rate in STEM**, many of them continuing to PhD, MD, and other advanced degree programs.

### Key Findings from External Evaluator of Sci 1 Program - SageFox Consulting

Overall, the students responded very positively to the AEWs. The facilitators were very highly regarded in most cases and the students found them to be helpful in a variety of ways. As a result, 84% of respondents felt that their grade had been improved as a result of attending the workshops.

Participants were most likely to appreciate that the AEW instructors were able to explain concepts in a different way than their course instructors. They also appreciated the guidance and focus provided by these workshops; in other words, by attending an AEW, the students essentially knew that they were setting aside time to study and gain mastery of the subject. Finally, interacting with other students in groups was another important draw.

### Academic Excellence Workshop Data (Spring 2008 to Fall 2011)\*

| Course                      | AEW      |        | Non AEW  |        | $\Delta$ GPA | $\Delta$ %pass |
|-----------------------------|----------|--------|----------|--------|--------------|----------------|
|                             | Ave. GPA | % pass | Ave. GPA | % pass |              |                |
| Chem 1A - Gen Chem I        | 2.55     | 90     | 1.82     | 66     | <b>0.73</b>  | <b>24</b>      |
| Chem 1B - Gen Chem II       | 2.71     | 97     | 2.20     | 81     | <b>0.51</b>  | <b>16</b>      |
| Chem 112A - OChem I         | 2.85     | 90     | 2.26     | 74     | <b>0.59</b>  | <b>16</b>      |
| Chem 112B - Ochem II        | 2.82     | 91     | 2.28     | 82     | <b>0.54</b>  | <b>9</b>       |
| Chem 135 - Biochem          | 2.89     | 96     | 2.08     | 79     | <b>0.81</b>  | <b>17</b>      |
| Biol 3 - Cell Biol (Now 1B) | 2.73     | 92     | 2.17     | 71     | <b>0.56</b>  | <b>21</b>      |

Notes : 1) To count as having participated in AEW attendance must be 70% or higher. Thus some of the non-AEW students did participate in workshop but their attendance was under 70%. Those who attend between 50 and 70% still benefit but the effect is not as marked. We clearly tell students that AEW can have an effect but they must attend consistently. 2) % pass - % of students who obtain a C- or better in the gateway course.

\* After tracking grades since 2003, Dr. Singmaster has stopped tracking because for a decade the workshops have been proven to be helpful for most students.

## Biographies for Selected RISE, S-STEM and LSAMP Students



Edwin Joya is a Mechanical Engineering student with a concentration in Design at San Jose State University (SJSU) and is expected to graduate in the Fall of 2014. While at SJSU, Edwin has excelled academically and has been a leader in his community. He has maintained a 3.62 GPA and is a member of various student organizations such as the Society of Latino Engineers and Scientist (SOLES), Mexican American Engineers and Scientists (MAES), and the Golden Key International Honour Society.

Edwin has been rewarded for his academic excellence while attending SJSU. He is an Engineering Leadership and Buick Achievers Scholarship recipient. He was awarded the distinction of Charles W. Davidson College of Engineering Dean's Scholar recipient for the 2011-2012 and 2013-2014 academic years. Recipients attain this status by achieving a 3.65 or higher GPA in at least two contiguous semesters of the three previous semesters prior to the Honors

Convocation.

Through the Golden Key International Honour Society, he was one of seventy engineering students from the United States selected to participate in the International Scholar Laureate Program. He visited China to learn about their technological advancements and their greatest engineering accomplishments. While in Beijing he went to the Olympic Green, where he learned about the green engineering techniques used in the Beijing National Aquatics Center, "Water Cube," as well as the unique design used in the Beijing National Stadium, "Bird's Nest." During his trip, he also visited the Three Gorges Dam in Yichang where one of the lead engineers lectured on the design process used in the project and the major benefits of renewable energy.

Edwin's participation with CSU-LSAMP gave him the opportunity to conduct research for Chemistry Professor Gilles Muller. He performed excitation scans on luminescent lanthanide complexes with chiral ligands to characterize their structural, dynamic, spectroscopic, and chiroptical properties.

Edwin has also given back to his community through his involvement with SOLES. Since his freshman year at SJSU, he has volunteered to participate in Science Extravaganza (SE). SE is a one-day event held on campus where over 500 middle school students from underprivileged areas of San Jose participate in various educational workshops. The goal of SE is to encourage these students to attend college and pursue a degree in the STEM fields. Edwin has been part of the Science Extravaganza Committee and has held the positions of workshop coordinator and team leader. As a workshop coordinator, he was in charge of recruiting eight professionals to plan and present their own workshop for SE. At the same time, he developed his own engineering workshop and trained eight college students so they could facilitate it during the event.

Edwin aspires to obtain an M.S. in Mechanical Engineering and will continue to encourage minority students in his community to attain a higher education in the STEM fields. (Note Edwin's two older siblings, Monica and Oscar, were also LSAMP students at SJSU and have BS degrees in mechanical engineering.)



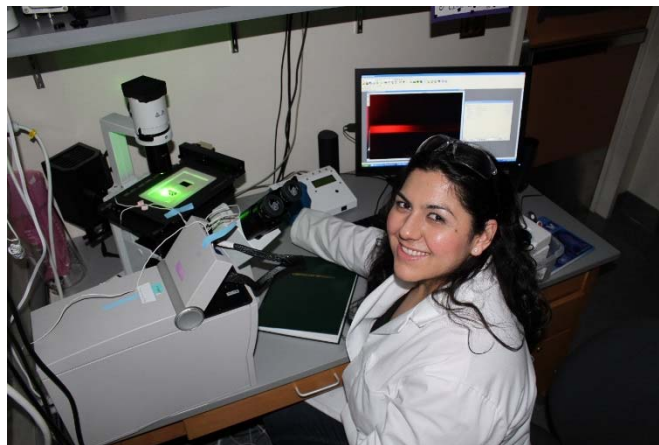
Alexia Perryman is a sophomore majoring in Chemistry with a concentration in Biochemistry at San Jose State University. She expects to graduate in Spring of 2016 and to continue in her education to a PhD in either toxicology or biochemistry. For the 2013-2014 year, she received a San Jose State College of Science Research and Teaching scholarship funded by the National Science Foundation S-STEM Program. The scholarship is awarded to students who are interested in pursuing a graduate degree, teaching, or career in research and have excelled in their course work at SJSU. Alexia will also be a recognized Dean's Scholar in Spring 2014 for maintaining above a 3.65 GPA for at least two contiguous semesters from the three previous semesters. In efforts of remaining a competitive candidate for graduate schools, Alexia continues to attend workshops provided through LSAMP to succeed in her coursework. Besides school work, she is the



community involvement and providing education about ecology for elementary school students as well as an active member of Forensic Science Students Club.

Alexia has recently joined Chemistry Professor Alberto Rascon's research group where she will be working on the isolation (cloning and expression) of a mosquito protease believed to be involved in blood meal digestion. This enzyme, known as AaSPV, has recently been identified and no one has yet isolated or studied the enzyme in vitro. She will be in charge of cloning the gene from mosquito cDNA, and hopefully, she can study it once it is expressed in bacteria. (Note – Alexia's sister, Danielle was also in LSAMP, S-STEM and finally RISE. She graduated in Dec. of 2013 and will be starting a graduate program in zoology at Oklahoma State University.)

Monica Kapil graduated from San Jose State University in May of 2009 with a BS degree in Mechanical Engineering. As an undergraduate, Monica conducted research at the Microelectromechanical Systems (MEMS) laboratory under the supervision of Dr. John Lee. Her research focused on microfluidics using the polymer polymethylhydrosiloxane (PMHS) for biological and chemical separation processes. She was funded by the NIH RISE Program. She also had the opportunity to conduct research at IBM Almaden Research Center, which was sponsored by NSF's Center for Polymeric Interfaces and Macromolecular Assemblies (CPIMA) - Stanford University. Her project was to automate the macromolecular self-assembly STAR polymer thin films. Monica was able to present her work at the CPIMA Annual Technical Forum and the Annual Biomedical Research Conference for Minority Students (ABRCMS).



Monica completed her MS in Mechanical Engineering at UC Berkeley and is currently an NSF Graduate Research Fellow in the PhD program in Bioengineering at UC Berkeley in Dr. Amy Herr's Laboratory of Bioinstrumentation for Quantitative Biology and Medicine. Monica's research includes the development of a rapid, quantitative, microfluidic quality assessment-binding assay for selection of improved immunoreagents. In addition she screens antibody-antigen pairs for clinical and research applications such as disease diagnostics, and novel therapeutics for cancer treatments and recently presented her work at the 2013 annual Biomedical Engineering Society (BMES) meeting. Monica is also very active in the Latino/a Association of Graduate Students in Engineering and Sciences (LAGSES) at UC Berkeley, serving first as treasurer and now as president of the association.

Monica's involvement with SJSU LSAMP started in the summer before her freshman year where she participated in the LSAMP Math Summer Intensive. While at SJSU Monica also served as workshop facilitator for math and physics workshops. She was also very active in the Society for Latino Engineering and Science Students (SOLES) and the Mexican American Engineers and Scientists Association (MAES).

Monica's commitment to her education and to diversity in STEM resulted in her being selected for the CSU Chancellor's Doctoral Incentive Program in 2013. Monica hopes to be able to return to the CSU as a faculty member once she completes her education.

As he entered college Cardius Richardson's mother, the sole provider for their family, was diagnosed with chronic blood clots which would affect her for the rest of her life. His father could not find work because he lacked a college degree and is disabled. Although he wanted to help his family, Cardius knew that he needed a college degree to be able to help them. To pay for college and assist his parents, he was going to have to work while going to college. For the first three years of college he worked as much as 50 hours a week while taking a

full load of courses, which clearly affected his GPA. What kept him motivated through these years was the laboratory portion of science courses. As the courses got more advanced, the freedom provided in lab to experiment increased and so did his enjoyment of science. Although majoring in Biology, it was his organic chemistry professor who encouraged him to start doing research and invited him to work in his lab. Cardius was concerned because he had not excelled in general chemistry courses, but he thought it was a good opportunity to test his commitment to his education.

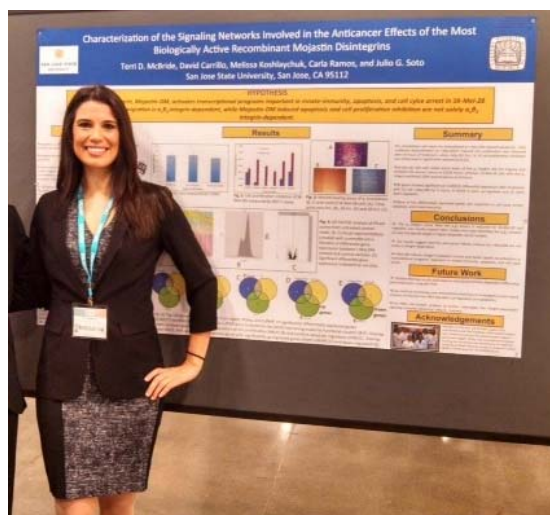


A few months after he started working with Dr. Brook, Cardius was selected for the new RISE, so he was able to earn money while doing research. His project was the synthesis of a verdazyl analog of terpyridine. Verdazyl radicals are unique amongst stable free radicals for two reasons. First, they carry three potentially variable substituents to give a variety of different structures. Second, the nitrogen atoms which carry the bulk of the spin density can coordinate metal ions giving the potential to form self assembled metal-organic structures with long range magnetic order. His commitment paid off in the form of several presentations at national meetings and a co-authorship in a publication.

Cardius graduated in Dec of 2010. He is currently in the PhD program in Environmental Toxicology at UC Santa Cruz funded with an NSF Graduate Research Fellowship.

Terri McBride just graduated with a major in Biological Sciences concentration in Molecular Biology. She is Mexican-American woman from a family with low socioeconomic status in San Antonio, Texas, and a first generation college student. Terri always had a desire to attend college; however, she did not have any specific career aspirations right out of high school. Initially, she attended San Antonio Community College but she did not have the proper support to become a successful college student. Due to mounting financial pressures she joined the U.S. Coast Guard, with the intent of using the G.I. Bill. She completed nearly ten years of honorable service in the enlisted corps.

Although she faced many barriers, she never gave up on her dream to attend college. In the fall of 2009 she matriculated at SJSU as a dietetics major. She became interested in nutrition while serving in the Coast Guard and was especially interested in the biochemical processes of the human body. Her interests shifted to cancer research when she learned about the correlations between diet and cancer. She was curious to know how, at a molecular level, flavonoids and other biomolecules prevented cancer incidence. This curiosity of molecular mechanisms of disease (and disease prevention) led her to change her major. She was appointed to the NIH RISE program and joined Dr. Julio Soto's lab, where she studied the anticancer effects of Mojastin- a disintegrin peptide found in Mojave rattlesnake venom. Her project specifically studied the migration inhibition capabilities of different Mojastin mutants on human melanoma cells and the signal transduction pathways important in the anti-cancer phenotypes observed in SK-Mel-28 cells after Mojastin treatment.



Two summer internships further piqued her curiosity. In her first internship in Dr. Chi's lab at Memorial Sloan-Kettering, she studied the molecular signatures of chemoresistant gastrointestinal stromal tumor (GIST) cells to discover key molecular targets for more effective targeted therapies. Her second internship in Dr. Sweet-Cordero's lab at Stanford was to identify genes that are responsible for chemoresistance in non-small cell lung



cancer tumor-initiating cells (TICs). She confirmed the reproducibility of the lab's RNA sequencing results that identified top candidate genes thought to be important in conferring chemoresistance in TICs, by analyzing differential gene expression of candidate genes after cisplatin treatment using qPCR. Additionally, after gene silencing of candidate genes, she assessed cell viability of the TICs in the presence of cisplatin.

Terri has excelled academically and professionally as demonstrated by her 3.9 GPA and an impressive list of awards including SJSU Outstanding Graduating Senior Award 2014, President's Scholar, Dean's Scholar of the Life Sciences, Outstanding Poster Award in Cancer Biology at ABRCMS 2011, and selection to the National Cancer Institute's ICRC. She started out at SJSU as an LSAMP student and, once she secured a research position, she was moved to the RISE program. After a year she moved over to the NIH MARC Program (Dr. Leslee Parr, Program Director) but completed her last semester at SJSU in RISE. Her educational goal is to obtain a combined MD/PhD degree specializing in medical oncology. She aspires to make significant contributions to cancer research- specifically, to innovate targeted therapies for currently untreatable cancers and to utilize bioinformatics and epidemiological studies to address health disparities in cancer.



Ngoc-Han Tran was born and raised in Vietnam and came to the US in 2005 during her freshman year in high school. She started college at San Jose State as a biology major with a concentration in systems physiology. After her first year at SJSU, she joined Dr. Lionel Cheruzel's research group in the Department of Chemistry, working in the area of inorganic biochemistry. Her work in the development of hybrid P450 enzymes as light-activated biocatalysts has resulted in two publications, in both of which she is the first author. With a positive experience in Dr. Cheruzel's research laboratory and her fascination for intricate biological processes, she decided to pursue a PhD in molecular biology in order to conduct research in health-

related topics. She participated in the 2012 Amgen Scholars summer research program at UC Berkeley in the department of Molecular and Cell Biology.

Ngoc-Han was a Scholar in Science (S-STEM) student for her last two years at SJSU. She just completed her first year in the PhD program at UCSF and she recently was awarded an NSF Graduate Research Fellowship.



Matthew Little explored many educational opportunities before pursuing a degree in meteorology at San Jose State University. Upon enrollment, he was enthusiastic about his education at SJSU, and sought out research opportunities immediately. In his undergraduate career, he has worked on two research projects at SJSU, and participated in an internship at NASA Ames Research Center. Matthew was a Scholar in Science (S-STEM) for three semesters. He graduated in May 2012 and is currently pursuing a PhD program at Texas A&M University, where he is doing research on developing a coupled ocean-atmosphere climate model.



RISE, LSAMP, S-STEM and Sci 1 Facilitators in Graduate Programs

| Name                  | Degree | Major     | Graduate School    | Degree | Year Started | Research Advisor | URM | LSAMP | RISE | AEW Facilitator | S-STEM | Comments |
|-----------------------|--------|-----------|--------------------|--------|--------------|------------------|-----|-------|------|-----------------|--------|----------|
| Rochester, Chris      | May-08 | Chem Eng  | UC Davis           | PhD    | 8            | Allen            | X   | X     |      | X               |        | a, PhD   |
| Esfandiari, Nagameh   | May-08 | Chemistry | UC Irvine          | PhD    | 8            | Muller           |     |       |      | X               |        | PhD      |
| McPherson, Scott      | May-08 | Elec Eng  | U of Washington    | PhD    | 8            | NA               | X   | X     |      | X               |        |          |
| Torres, Carlos        | May-08 | Elec Eng  | UC Santa Barbara   | PhD    | 8            | Eggers           | X   | X     |      |                 |        | a        |
| Kapil, Monica         | May-08 | Mech Eng  | UC Berkeley        | PhD    | 8            | Lee              | X   | X     | X    | X               |        | b        |
| Anyanwu, Uchenna      | May-09 | Comp Eng  | Virginia Tech      | PhD    | 9            | Muller           | X   | X     |      | X               |        | a        |
| Espinoza, Christian   | May-09 | Mat Eng   | U of Illinois      | PhD    | 9            | Selvaduray       | X   | X     |      |                 |        | bc, PhD  |
| Babakhanyan, Maria    | May-10 | Biology   | Penn State         | PhD    | 10           | Rech             |     |       |      |                 | X      |          |
| Bick, Cindy           | May-10 | Biology   | U of Michigan      | PhD    | 10           | Parr             | X   | X     | X    |                 |        | a        |
| Chavez, Natalie       | May-08 | Biology   | Brown              | PhD    | 10           | Soto             | X   | X     |      |                 |        |          |
| Coles, Briana         | May-10 | Biology   | John Hopkins       | MS     | 10           | NA               | X   | X     |      |                 |        | MS       |
| Udo, Akpabio          | May-09 | Chem Eng  | SJSU               | MA     | 10           | NA               | X   | X     |      |                 |        |          |
| Chemistruck, Victoria | May-10 | Chemistry | U of Minnesota     | PhD    | 10           | Brook            |     |       |      |                 | X      |          |
| Fields, Jorie         | May-10 | Chemistry | UC Davis           | PhD    | 10           | Silber           |     |       |      | X               |        |          |
| Fox, Douglas          | PB-10  | Chemistry | UC Berkeley        | PhD    | 10           | D'Alarcao        |     |       |      | X               |        |          |
| Hua, KimNgan          | May-10 | Chemistry | U of Massachusetts | PhD    | 10           | Muller           |     |       |      | X               |        |          |
| Le, Thao Nhi (Lily)   | May-10 | Chemistry | UC Santa Cruz      | PhD    | 10           | Collins          |     |       |      | X               | X      |          |
| Corsa, Hansel         | May-10 | Civil Eng | CSULA              | MS     | 10           | NA               | X   | X     |      | X               |        | b        |
| Galan, Francisco      | May-10 | Civil Eng | Oregon State       | MS     | 10           | NA               | X   | X     |      | X               |        | b        |
| Lloyd, Bryce          | May-10 | Civil Eng | UC Davis           | PhD    | 10           | McMullin         | X   | X     |      |                 |        |          |
| Varela, Lawrence      | May-08 | Comp Sci  | UC San Francisco   | PhD    | 10           | NA               | X   | X     |      |                 |        |          |
| Baker, Corey          | May-08 | Elec Eng  | U of Florida       | PhD    | 10           | NA               | X   | X     |      |                 |        | b        |
| Dunlap, Alex          | May-09 | Elec Eng  | Georgia Tech       | PhD    | 10           | Muller           | X   | X     | X    | X               |        | ab       |
| McIntosh, Hamadi      | May-10 | Physics   | Arizona State      | PhD    | 10           | Kress            | X   | X     |      |                 |        | a        |
| Ezunpke, Yawo         | May-11 | Aero Eng  | UC San Diego       | MS     | 11           | NA               | X   | X     |      |                 |        |          |
| Dinis, Jorge          | May-11 | Biology   | U of Wisconsin     | PhD    | 11           | Ouverney         | X   | X     | X    | X               |        | a        |
| Espinosa, Aileen      | May-11 | Biology   | UC Davis           | PhD    | 11           | Collins          | X   | X     | X    |                 |        | a        |
| Richardson, Cardius   | Dec-10 | Biology   | UC Santa Cruz      | PhD    | 11           | Brook            | X   | X     | X    | X               |        |          |
| Seoane, Agustin       | May-11 | Biology   | UC San Francisco   | PhD    | 11           | Soto             | X   | X     | X    |                 |        | a        |
| Shores, Amanda        | May-09 | Biology   | Colorado State     | PhD    | 11           | Lambrecht        | X   | X     | X    |                 |        | a        |
| Beckford, Jeremy      | May-11 | Chemistry | CUNY               | PhD    | 11           | D'Alarcao        | X   | X     | X    | X               |        |          |
| Ingram, Andrew        | May-11 | Chemistry | Stanford           | PhD    | 11           | Muller           |     |       |      | X               |        |          |
| Sun, Daniel           | May-11 | Chemistry | UC Los Angeles     | PhD    | 11           | Brook            |     |       |      |                 | X      |          |
| Orukari, Inema        | May-09 | Elec Eng  | Wash-St.Louis      | MD/PhD | 11           | D'Alarcao        | X   | X     |      |                 |        | ab       |
| Ortiz, Raquel         | May-11 | Math      | SJSU               | MS     | 11           | NA               | X   | X     |      | X               |        | MS       |

| Name                | Degree | Major       | Graduate School    | Degree | Year    | Research  | URM | LSAMP | RISE | AEW         | S-STEM | Comments |
|---------------------|--------|-------------|--------------------|--------|---------|-----------|-----|-------|------|-------------|--------|----------|
|                     |        |             |                    |        | Started | Advisor   |     |       |      | Facilitator |        |          |
| Seipert, Steven     | May-12 | Aero Eng    | Stanford           | MS     | 12      | NA        |     |       |      | X           |        |          |
| Chaidez, Veronica   | May-11 | Biology     | Saudi Arabia       | MS     | 12      | Parr      | X   | X     | X    |             |        | a        |
| Rodriguez, Amanda   | May-12 | Biology     | Baylor             | PhD    | 12      | Collins   | X   | X     | X    |             |        | a        |
| Calabretta, Phil    | May-12 | Chemistry   | U of Wisconsin     | PhD    | 12      | Eggers    |     |       |      | X           |        |          |
| Crowder, Caitlin    | May-12 | Chemistry   | U of Oklahoma      | PhD    | 12      | D'Alarcao |     |       |      | X           | X      |          |
| Oliver, Oliverio    | May-11 | Chemistry   | SFSU               | MS     | 12      | Brook     |     |       |      | X           | X      |          |
| Sanchez, Jorge      | May-12 | Chemistry   | UC Davis           | PhD    | 12      | D'Alarcao | X   | X     | X    |             |        | a        |
| Constant, Colin     | Dec-12 | Elec Eng    | U of South Florida | PhD    | 12      | NA        |     |       |      | X           |        |          |
| Little, Matthew     | May-12 | Meteorology | Texas AM           | PhD    | 12      | Cordero   |     |       |      |             | X      |          |
| Abrams, Michael     | Dec-12 | Biology     | U Southwest Texas  | PhD    | 13      | Ouverney  |     |       |      |             | X      |          |
| Burke, Thomas       | May-11 | Biology     | Baylor             | MD/PhD | 13      | White     | X   | X     | X    |             |        | a        |
| Tran, Ngoc-Han      | May-13 | Biology     | UC San Francisco   | PhD    | 13      | Cheruzel  |     |       |      |             | X      |          |
| Castellano, Brian   | May-13 | Chemistry   | UC Berkeley        | PhD    | 13      | Eggers    |     |       |      | X           |        | a        |
| Grist, Jonathan     | May-13 | Chemistry   | U of Utah          | PhD    | 13      | Collins   |     |       |      | X           | X      |          |
| Nguyen, Brian       | May-13 | Chemistry   | U of Illinois      | PhD    | 13      | Muller    |     |       |      | X           |        |          |
| Ponce, Servando     | May-13 | Chemistry   | UC Santa Cruz      | PhD    | 13      | Brook     | X   | X     | X    | X           |        | a        |
| Ahumada, Manuel     | May-13 | Mech Eng    | Stanford           | PhD    | 13      | Lee       | X   | X     |      |             |        | ab       |
| Ward, Caroline      | May-13 | Physics     | CSULB              | MS     | 13      | Hammill   | X   | X     |      | X           | X      | a        |
| Bortolazzo, Anthony | May-14 | Biology     | U of Wisconsin     | PhD    | 14      | French    |     |       |      | X           | X      |          |
| Carrillo, David     | May-14 | Biology     | SFSU               | MS     | 14      | Soto      |     | X     | X    |             |        |          |
| Ghadiri, Farsheed   | May-14 | Biology     | SJSU               | MS     | 14      | Ouverney  |     | X     | X    |             |        | MS       |
| Ghadiri, Jamsheed   | May-11 | Biology     | UC Santa Cruz      | PhD    | 14      | Ouverney  | X   | X     | X    | X           |        |          |
| Nystrom, Stephanie  | May-13 | Biology     | UC Santa Cruz      | PhD    | 14      | Ouverney  | X   | X     | X    |             |        | a        |
| Perryman, Danielle  | Dec-13 | Biology     | Oklahoma State     | MS     | 14      | Parr      |     | X     | X    |             |        |          |
| Romero, Diana       | May-13 | Biology     | UC Santa Cruz      | PhD    | 14      | Ouverney  | X   | X     | X    |             |        | a        |
| Thomas, Anthony     | May-14 | Biology     | UC San Diego       | PhD    | 14      | VanHoven  |     |       |      |             | X      |          |
| Tran, Kevin         | May-14 | Biology     | CSULB              | MS     | 14      | Abramson  |     |       |      |             | X      |          |
| Jefferson, Truman   | May-13 | Chem Eng    | SJSU               | MS     | 14      | Muller    | X   | X     | X    | X           |        |          |
| Dang, Andy          | May-14 | Chemistry   | U of Washington    | PhD    | 14      | Pesek     |     | X     |      | X           | X      |          |
| Deol, Kirandeep     | May-14 | Chemistry   | U of Wisconsin     | PhD    | 14      | Muller    |     |       |      | X           |        | a        |
| Diniz, John         | May-14 | Chemistry   | UC Santa Cruz      | PhD    | 14      | Terrill   |     |       |      | X           | X      |          |
| Heredia, Jeremiah   | May-11 | Chemistry   | U of Illinois      | PhD    | 14      | Cheruzel  | X   | X     | X    |             |        | a        |
| Nguyen, Daniel      | May-14 | Chemistry   | John Hopkins       | PhD    | 14      | Cheruzel  |     | X     |      | X           | X      |          |

| Name  | Degree | Major       | Graduate School  | Degree | Year           | Research       | URM | LSAMP | RISE | AEW                | S-STEM | Comments |
|---|--------|-------------|------------------|--------|----------------|----------------|-----|-------|------|--------------------|--------|----------|
|   |        |             |                  |        | <b>Started</b> | <b>Advisor</b> |     |       |      | <b>Facilitator</b> |        |          |
| Roberts, Austin                                 | May-12 | Chemistry   | U of Albany      | PhD    | 14             | Terrill        | X   | X     |      | X                  | X      | a        |
| Franco, Joy                                     | May-14 | Mech Eng    | Stanford         | PhD    | 14             | Wilkinson      | X   | X     | X    |                    |        | a        |
| Bagley, Richard                                 | May-14 | Meteorology | SJSU             | MS     | 14             | Clements       |     |       |      |                    | X      |          |
| Crukov, Greta                                   | May-14 | Physics     | Kent State       | PhD    | 14             | Beyersdorf     |     | X     |      |                    | X      |          |
| Pilling, Michael                                | May-14 | Physics     | SJSU             | MS     | 14             | Taiedi/Heindl  |     |       |      |                    | X      |          |
| <b>NSF Graduate Fellowships (30K/yr, 3 yrs)</b> |        |             |                  |        |                |                |     |       |      |                    |        |          |
| Kapil, Monica                                   | May-08 | Mech Eng    | UC Berkeley      | PhD    | 9              | J.Lee          | X   | X     |      | X                  |        |          |
| Chavez, Natalie                                 | May-08 | Biology     | Brown            | PhD    | 10             | Soto           | X   | X     |      | X                  |        |          |
| Haller, Ben                                     | May-09 | Biology     | McGill           | PhD    | 10             | Brook          |     |       |      | X                  |        |          |
| Le, Thao-Nhi(Lily)                              | May-10 | Chemistry   | UC Santa Cruz    | PhD    | 10             | Collins        |     |       |      | X                  | X      |          |
| Espinoza, Christian                             | May-09 | Mat Eng     | U of Illinois    | PhD    | 10             | Selvaduray     | X   | X     |      |                    |        | c        |
| Dinis, Jorge                                    | May-11 | Biology     | U of Wisconsin   | PhD    | 11             | Ouverney       | X   | X     |      | X                  |        |          |
| Richardson, Cardius                             | Dec-10 | Biology     | UC Santa Cruz    | PhD    | 11             | Brook          | X   | X     |      | X                  |        |          |
| Shores, Amanda                                  | May-09 | Biology     | Colorado State   | PhD    | 11             | Lambrech       | X   | X     |      |                    |        |          |
| Chemistruck, Victoria                           | May-10 | Chem        | U of Minnesota   | PhD    | 11             | Brook          |     |       |      |                    | X      |          |
| Ingram, Andrew                                  | May-12 | Chemistry   | Stanford         | PhD    | 11             | Muller         |     |       |      | X                  |        |          |
| Calabretta, Phil                                | May-12 | Chemistry   | U of Wisconsin   | PhD    | 12             | Eggers         |     |       |      | X                  |        |          |
| Ahumada, Manuel                                 | May-13 | Mech Eng    | Stanford         | PhD    | 13             | Lee            | X   | X     |      |                    |        |          |
| Franco, Joy                                     | May-14 | Mech Eng    | Stanford         | PhD    | 14             | Wilkinson      | X   | X     |      |                    |        |          |
| Tran, Ngoc-Han                                  | May-13 | Biology     | UC San Francisco | PhD    | 13             | Cheruzel       |     |       |      |                    | X      |          |
| <b>DOE Graduate Fellowships (35K/yr, 3yrs)</b>  |        |             |                  |        |                |                |     |       |      |                    |        |          |
| Kingsley Odigie                                 | Dec-08 | Biology     | UC Santa Cruz    | PhD    | 9              | NA             | X   | X     |      |                    |        |          |
| <b>Ford Foundation Dissertation Fellowship</b>  |        |             |                  |        |                |                |     |       |      |                    |        |          |
| Dinis, Jorge                                    | May-11 | Biology     | U of Wisconsin   | PhD    |                | Ouverney       | X   |       |      | X                  |        | a        |
| <b>Gilliam - HHMI</b>                           |        |             |                  |        |                |                |     |       |      |                    |        |          |
| Castellano, Brian                               | May-13 | Chemistry   | UC Berkeley      | PhD    | 13             | Eggers         |     |       |      | X                  |        | a        |
| a) MARC support for 1 or two years also         |        |             |                  |        |                |                |     |       |      |                    |        |          |
| b) MEP  |        |             |                  |        |                |                |     |       |      |                    |        |          |
| c) McNair                                       |        |             |                  |        |                |                |     |       |      |                    |        |          |