

Summer Research Scholar Program: Mentorship Opportunity for Postdocs

UC San Diego Extension hosts approximately 400 high school students for a 3-week summer program called [Academic Connections](#). The students live on campus and take “classes” for which they get college credit. Most of the classes are taught and mentored by graduate students and/or postdocs and the topics range from creative writing to robotics.

Seven years ago, [Prof. Elizabeth Komives](#) started a “class” equivalent to undergraduate research through the Academic Connections program. **The “class” is called Research Scholars and students have to apply specifically for this component if they wish to do individual research during the 3-week program.** The object of the program is to have the students experience science where we don’t yet know the answer, and to have them stretch themselves to understand things that are beyond what they have learned in school so far. Often this is their first experience of discovery-based science.

Program Description

To be accepted into the program, the students must have high GPAs and write an essay explaining what research they are interested in doing. Prof. Komives then tries to match them with individual labs where they work with a grad student or postdoc and try to do some real research. The students work 9 am – 5 pm Monday - Friday.

During the three weeks, each Wednesday evening Prof. Komives and the students meet as a group to discuss how things are going in the individual projects of the students. It is impressive to see how the first week everyone is hesitant to talk about what they are doing, but by the end, they are confident and talk like an experienced researcher.

On the last day of the program, the students and mentors have a poster session where the students present what they did during their 3-week experience. They are only allowed to put results on their poster that they actually got themselves, and they are encouraged to put failed or incomplete work as well. Additionally, they are encouraged to read background papers during down time between work in the lab. Prof. Komives helps the students create the poster so they don’t waste time with formatting. Most of the mentors and faculty come to the poster session so the students get to meet many famous faculty. In addition, the student tend to have a lot of fun at the poster session because they find they can explain their work well since they are the ones who did it!

Mentor Responsibilities

Prof. Komives encourages and welcomes the engagement of postdoctoral scholars in this program, stating “It would really wonderful to have postdoctoral scholars committed to mentoring a Research Scholar”. In addition to the mentorship of students, postdoc mentors could help with the application screening process and the matching of applicants to labs (often occurs from February to April each year) as well as postdoc mentors who are interested in education help with the Wednesday evening meetings and the poster preparation (to take place during the 3 week program).

Program Impact

An important component to the Research Scholars program is our partners who have outreach to underserved student populations. Each year ~25% of the Research Scholars come from underrepresented populations or low income families and over 50% are girls. For those in need, we raise scholarships. During the program, we take care not to distinguish the scholarship students from the paying ones, and the experience of the diverse population is very cross-educational for all.

The program is life-changing for many of these students. From the class of 2011, Ryan Velasco (Hispanic) graduated from Cornell and is now pursuing graduate work in Biomedical Sciences, David Gonzalez is majoring in Biology at Cal State San Marcos. From the class of 2012, John Roethle (disadvantaged) attends Yale University, Jari Tamayo (disadvantaged) attends the University of Washington, Stephanie Barrera (Hispanic) is at UC Merced, Karla Mendoza (Hispanic) is at Harvard, Vivian Phillips (African American) is at Agnes Scott, and Baseem Taraz (disadvantaged) is at UC Berkeley. From the class of 2013, Avery Bonner (African American) is at NYU, Eduardo Ramirez (Hispanic) is at UC Davis, and Rita Tran (disadvantaged) is at UCLA. From the class of 2014, Jennifer De Leon (Hispanic) is at Mount Saint Mary's, John Engel (Hispanic) is at UC Riverside, and Hannah Reid (African American) is at the University of Tampa. A particular effort is also made to populate each Research Scholars class with young women who might not be encouraged to enter STEM fields. Female Research Scholars are now at Pitzer College Villanova, the University of Maryland, the University of Chicago, the University of Washington (2 students), UC Berkeley (3 students), SMU, UT Austin, the Honors College at Arizona State, Olin College of Engineering, Johns Hopkins, Emory, UC Riverside, UCSD, UCLA, USC, and Williams College.

Nearly all of these young women are pursuing undergraduate STEM majors. It is also notable that several of the Research Scholars continued to work on their projects after the 3 week summer course ended. Three co-authored publications and two won science fairs at various levels.

For more information about how to become a postdoc mentor and make a difference in a burgeoning scientist's life, please contact [Prof. Elizabeth Komives: ekomives@ucsd.edu](mailto:ekomives@ucsd.edu)