



High School Scholars Program

Program Description:

The High School Scholars Program, a part of the Life Sciences Summer Institute (LSSI) Student Internship Program, has been developed to help increase awareness of the life science industry and related fields of research to students in the San Diego region. Students gain exposure to career options, hands-on laboratory experience, work readiness skills, and mentoring by a company or research scientists.

Student Experience:

Throughout the eight-week program, which includes one week of non-paid pre-internship training followed by a seven-week paid internship, students are involved with a full-time research project as well as enrichment activities. Students learn how to formulate and test hypotheses, prepare experiments and draw conclusions from those experiments. They also learn to maintain laboratory notebooks and take part in regular lab meetings and group discussions. At the end of the program, students present their research projects to their mentors, lab members and families. In addition, students will develop scientific posters reflecting on their summer experience and highlighting their research and future career goals. Posters will be displayed during a culminating event and posted on the Miramar Amgen Teacher Support Center website.

Mentor Expectations:

Program mentors are expected to develop/adapt a research project so that the intern can participate as fully as possible in the scientific process. Every lab will have different research needs but in general projects should be specific as to purpose, may either be stand alone or a specific part of a greater research project of the lab/mentor, and should be encompassing enough to provide the student a look at how research science works. In other words, what they do should have a purpose towards a defined goal, not just be a series of random science experiences. Ideal projects will generate discussible data within the program's timeframe.

Coordinator Assistance:

The program coordinator will screen applications and match potential interns with mentors based on established preferences and interests. Mentors will then be able to select from among this pre-screened pool for interview choices. During the program the coordinator will conduct weekly enrichments with interns and help prepare final presentations (see presentation guide for specifics). The coordinator will also arrange and coordinate all program logistics and provide all support for mentors and interns as needed, where needed.

“Biotech Bootcamp”:

The one week Biotechnology "Boot Camp" training prior to the internship will provide attendees with hands-on training in basic lab skills used in biomedical research including safety, micropipettors, microscopes, aseptic techniques, solution preparations, electrophoresis, PCR, Elisa assays, use of significant figures, controls, and proper lab notebook maintenance and documentation. Lecture topics will include an overview of the life sciences industry, an introduction to the drug discovery process including regulatory issues (GLP, GMP, FDA) and safety training. Interactive modules will provide soft skills for work readiness.