This past summer (2018), the W.M. Keck Science Department admitted the sixth class of the Summer Science Immersion Program (SScIP). Two SScIP classes have already graduated. This program was originally funded by a generous grant to The Claremont Colleges from the Howard Hughes Medical Institute (HHMI). Funding for 2018 was provided by Claremont McKenna and Pitzer Colleges and by generous grants from Beckman Coulter Foundation and Southern California Edison to Scripps College.

This year 46 incoming Claremont McKenna, Pitzer, and Scripps science students participated in the week-long program, which was centered on the theme “The Chemistry of Life.” This was the largest group of participants we have admitted to the program. The students lived in a residence hall on the Scripps College campus and ate their meals in the CMC dining hall.

According to Former Weinberg Family Dean of Keck Science and Professor of Chemistry David Hansen, “The Summer Science Immersion Program was constructed by the department to introduce participants to cutting-edge science and to the expectations and demands of college-level science coursework.” The students participated in interactive seminars, field trips, and hands-on laboratory experiences on topics including the structure and function of biomolecules, such as nucleic acids and proteins. As a final project, the students analyzed the genome and proteome of the bacterium *Tetrahymena thermophila* and had the opportunity to contribute their research results to an international database.

Says participant, Victoria Castro, PTZ ’21 “"It was really a immersive experience, it gave me a precursor to what the Claremont Colleges were like. Its gives you that head start in building relationships with faculty in Keck, but also students across CMC, Scripps and Pitzer."”

The week began with a Welcome Dinner for students and their families. The first day of programming introduced students to the introductory chemistry lab. In addition to training in laboratory safety (close-toed shoes, goggles, and long pants!), students performed two experiments and focused on good laboratory technique and accurate data-recording. Students were able to build upon this knowledge later in the week when they learned about “Nature’s Nanotechnology: butterflies, beetles, and lotus leafs” in a session...
lead by Assistant Professor of Chemistry Babak Sanii and when they assembled models of biomolecules, ultimately creating a polypeptide chain.

Reflecting on her SScIP experience, Binita Pandya (SCR, ’22) says, “SScIP was a program that was very instrumental for my transition into college. It allowed me to gain confidence about pursuing the sciences at the colleges and it gave me confidence about my ability to interact with professors and faculty. Beyond the academic benefits, SScIP gave me a community and gave me my first friends in college. I’m so grateful to have been part of such an amazing program and I’ll fondly remember my time at SScIP even beyond college.”

The concept of water and life on Planet Earth was extended to the search for life in the solar system and on exoplanets (planets in solar systems outside our own) during a viewing of videos on exoplanets and a visit to the Griffith Observatory in Los Angeles.

John Christopher and Nayeli Gutierrez-Caarez with Peer Mentors Alan Hernandez and Ann Ly at the Griffith Observatory.

SScIP 2018 about to head to the Griffith Observatory.
Throughout the week, students learned about science as a discipline and science as a culture. Through interactions with science faculty as well as professors in the areas of psychology and sociology, the SScIP students established peer networks and learned about the importance of collaborative work. They participated in a workshop lead by Jenn Wells (Assistant Dean and Director, Scripps Communities of Resources and Empowerment) and a workshop lead by Professor Patrick Sharp (Cal State Los Angeles, Chair of Liberal Studies) that engaged them in a dynamic discussion on common portrayals and expectations of scientists in the context of gender and race. Professor of Chemistry Nancy Williams lead a discussion on “Who Speaks for Science?”

There was also time for fun throughout the week, with icebreaker activities lead by the peer mentors, a scavenger hunt around Keck Science, pool night at Scripps Tiernan Field House, group challenges, and Pizza Night.

Keck Science faculty and staff with expertise in biology and chemistry led the program. The instructors included Tom Davis, Lab Lecturer in General Chemistry; Ethan Van Arnum, Assistant Professor of Chemistry, Babak Sanii, Assistant Professor of Chemistry, Nancy Williams, Associate Professor of Chemistry, Emily Wiley, Professor of Biology, and Marion Preest, Pritzker Family Foundation Professor of Biology. Chiugo Akujuobi (SCR, ’21), Ifunanya Okeke (SCR ’19), Alan Hernandez (CMC, ’20), Ann Ly (SCR, ’21), Amanda Martinez (SCR, ’20), and Katherine Whitman (CMC ’19) served as the peer mentors. All were former participants in SScIP.
The Keck Science Department hopes to build upon the success of SScIP by adding year-round programming to keep alums engaged throughout their college careers. Keck Science gratefully acknowledges HHMI, CMC, Pitzer, and our two newest SScIP sponsors, the Beckman Coulter Foundation and Southern California Edison, for their generous support of this program.