

**THIS SUMMER, OLIVIA LEWIS '18** was one of 13 young women to participate in UCSD's Reproductive and Oncofertility Science Academy (ROSA). This prestigious, all-girls' program met three times a week and consisted of hands-on classroom sessions, field trips and a research project. The program is taught by various doctors and professionals in the medical field – and the girls fit right in with their own personalized lab coats.

*"(Working with doctors) was a little intimidating, but I realized that I'm here for a reason," Olivia says. "They picked me to be here. I'm capable of doing this."*

Oncofertility is an emerging field that addresses the fertility needs and quality-of-life issues for young cancer patients. Cancer has touched Olivia's life as her grandmother passed away from breast cancer before she was born. "It's something I've always had in the back of my head," she explains. "But it wasn't until I got into the program that I realized (reproductive health) is what I want to study."

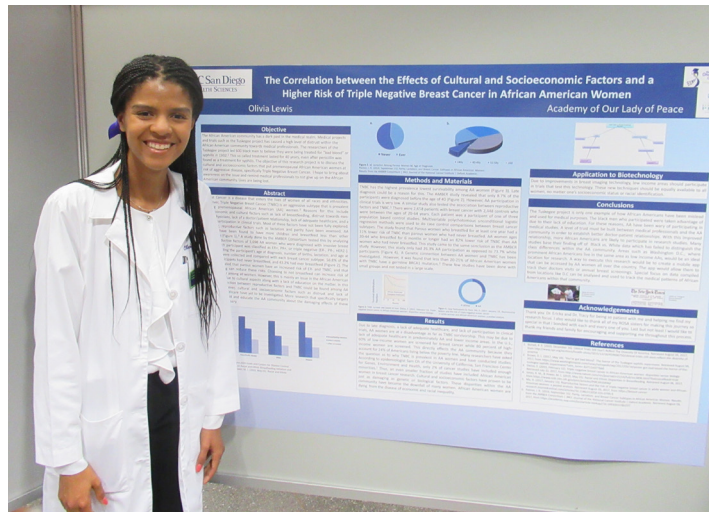
**Olivia's eyes light up when she recalls her field trips.** At the Scripps Institute of Oceanography, Olivia watched as sea urchin eggs were fertilized under a microscope. At Dr. Irene Su's Fertility Clinic, the girls gave themselves ultrasounds and learned about in vitro fertilization. At the Wild Animal Park, they counted horse sperm under a microscope to see how many were alive and well, indicating how likely conception via artificial insemination might be.

Olivia was particularly moved at the Children's Hospital of Orange County (CHOC). "It was so powerful to see all the work that goes into making sure the children have the most normal life as possible," Olivia says. "It's a really amazing facility."

Olivia's hard work and new knowledge culminated in her research project, which asked, "What effect does socioeconomic and cultural factors have on Triple Negative Breast Cancer survival rates in the African American community?" (Triple Negative Breast Cancer [TNBC] is an aggressive subtype that is most prevalent among African American women.) This loaded question did not come easily to Olivia, as she was originally searching for another kind of contributing factor.

## OLIVIA LEWIS '18 TAKES ON REPRODUCTIVE HEALTH & ONCOFERTILITY

By Samantha League  
COMMUNICATIONS COORDINATOR



Olivia pictured with her presentation on *The Correlation Between the Effects of Cultural and Socioeconomic Factors and a Higher Risk of Triple Negative Breast Cancer in African-American Women*.

especially impactful. "She's amazing. She taught us that we (girls) have to stick together and help each other because women are the minority in the medical field," Olivia says. "She taught us how to be confident and professional. She's definitely my role model." Olivia also relied on mentorship from Tracy Parrott, who works in pharmaceutical law.

Surprisingly, Olivia credits her OLP speech class for preparing her for this type of internship. "Speech class ended up really pulling me through because we had to speak in front of people, even in the classroom," Olivia explains. "I knew how to prepare everything beforehand. It also helped my memorization (skills) too – for the end presentation, I had no notecards." (See photo above.) She also credits AP classes for preparing her for that type of workload.

As for what the future holds, Olivia has a couple ideas: she's thinking of becoming an IVF specialist or someone who specializes in gynecological cancers. But for now, she's thrilled to be back in a biology class – specifically Ms. Ma'ake's AP Bio.

*"I'm realizing I just love biology," Olivia beams.*

"I was trying to find a biological correlation, but I just wasn't finding it (in the literature)," Olivia explains. "Then I realized it was more of a bioethics thing, such as lack of adequate health care. I had a mini breakdown because I didn't know what to do."

Luckily, Olivia kept going and found a study that examined the link between breastfeeding and TNBC in the African American community. Due to a host of historical and social factors, African American women are least likely to breastfeed compared with other ethnicities. The biological act of breastfeeding, which is influenced by social factors (i.e. stigma, status, social support), became the connecting piece she needed to comfortably dive into her topic.

"A lot of my stuff was ethical, which was hard for me because I wanted more biological factors, but it ended up working out," Olivia explains.

One of her mentors, Dr. Ericka Senegar-Mitchell, was



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Friday, November 3, 2017 at 7:00 pm  
Saturday, November 4, 2017 at 7:00 pm

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