



Olivia Xie (UC Berkeley) on the [STEM Research in Osaka](#) program, in Japan

Small heat shock proteins in cancer: expression in tumors and drug target potential

My research project investigated the underexplored HSPB family of heat shock proteins, which are linked to cancer progression and drug resistance. By analyzing RNA expression across 15 cancers and using

machine learning-based virtual screening, I identified promising drug candidates for HSPB5 and uncovered unexpected patterns that point to new directions for cancer research.

*"My four months in Japan transformed me into a different person. Beyond growing as an **independent researcher**, I learned invaluable lessons from Japanese customs and professionalism, like punctuality and collective consideration. I also built **resilience, learning to embrace mistakes as opportunities for growth** in both the lab and daily life. This experience expanded my cultural and academic awareness, inspiring me to consider returning to Japan for graduate school and affirming that research abroad offers truly **life-changing personal and societal takeaways**."*

- Olivia Xie