

ROBERT LUO, Highland Park High School, Dallas

HELEN ZHANG, Highland Park High School, Dallas

PROJECT: A Novel Therapy for the Treatment of Acute Myeloid Leukemia

FIELD: Biology

MENTOR: Dr. Mi Deng, Instructor, UT Southwestern Medical Center

"...students should be exposed to a professional science setting early in their development."

Robert and Helen's research identified a new potential target for the treatment of acute myeloid leukemia. The combination of family experiences with cancer and the science of the topic piqued the team's interest in this project. With this project, the world can come one step closer to solving the global problem of leukemia.



ROBERT LUO

YEAR: Junior

HOMETOWN: Dallas

It took Robert some time to get used to working with live mice in the lab, but after a few weeks, the nervousness went away and he was able to have a little more fun conducting his research! Robert's interest in stem cells was a major influence in the pursuit of this research, as well as his first-year and sophomore year biology teachers. Robert's father, a cardiologist, also helped pique his interest in STEM.

Outside of the lab, Robert participates in Academic Decathlon, tutors underserved children and plays violin in the Dallas Asian American Youth Orchestra (DAAYO). His very first science project was my 8th grade science fair, which sought to determine the effect of different antibiotics and disinfectants on bacterial growth through zones of inhibition.

Robert aspires to be either a physician, computational chemist or a software engineer at a company like Google and he anticipates majoring in chemistry, biology and/or computer science. If he could talk to anyone in history, Robert would sit down with Isaac Newton because of his influence on physics and mathematics, which still holds weight today.



HELEN ZHANG

YEAR: Senior

HOMETOWN: Dallas

Helen Zhang anticipates majoring in biology in college and aspires to be a physician-scientist. Her father is a researcher, and he piqued her interest early-on when he discussed the TCGA database and the thorough information it contains regarding gene expression and mortality rates of patients. Helen's interest rose and led her to research any high correlation between the expression of a certain gene and the survivorship rate of cancer patients. She later identified the relationship between LILRB4 expression and AML survivorship rate.

Helen is most proud about becoming a co-author of an article published in *Nature*, as well as achieving ninth place in Policy Debate at the Texas University Interscholastic League State Cross-Examination Debate tournament. She has also been recognized as a National Merit Commended Scholar.

Outside of the lab, Helen co-captains the Highland Park High School Debate Team. She also volunteers at the University of Texas Southwestern Medical Center and participates in taekwondo.

This being said, Helen's favorite school subject is English, because she loves being able to write down her thoughts in their purest form. If she could speak with anyone in history, it would be Alexander Fleming, because he unintentionally discovered a substance that would revolutionize all medicine – she'd ask him about his accomplishment and near-impossible luck.