

Enjoying my grandmother's cooking was something I looked forward to each summer vacation, until she started showing signs of Alzheimer's Disease. My grandfather had previously battled this disease for ten years, so I knew about its devastating impacts. One summer, my aunt told me that grandmom couldn't cook for me anymore because when she did, she would add salt, promptly forget she had done so and add more moments later. This story marked my first exposure to the lesser-known but extremely invasive impacts of Alzheimer's Disease: how it alters daily life in ways that extend far beyond struggling to convey thoughts or repeating the same questions in conversations. The kitchen had become a place where memory loss announced itself.

I started thinking about memory loss and dementia in relation to how they might affect others around me. One of my favorite activities is listening to music with my dad on long drives. We would take turns choosing songs, and somehow, he rarely repeated the same one twice, making me think his music knowledge was infinite. But knowing that familial Alzheimer's runs in my family, I found myself wondering if one day he might forget those songs altogether, along with the countless shared moments they carried.

What are we without our memories? Memories are the stories, traditions, and identities that make us who we are. What are we if we lose memories of our loved ones and the joyful memories we shared with them? If memories shape who we are, what happens to us when they fade?

The world is still searching for the first survivor of Alzheimer's. This fact has both troubled and motivated me. The challenge of answering the unanswered was what drew me to science, and Alzheimer's was the mystery placed before me. My starting point with this unsolved disease was genetics, the foundation of familial Alzheimer's Disease. I began by reading about genetic risk factors associated with Alzheimer's and eventually was able to write a survey paper on the topic. Seeing how knowledge and research could translate into real-world impact, my next step was joining the Alzheimer's Association's Community Engagement Committee, where I helped facilitate community engagement for the Walk to End Alzheimer's in Silicon Valley.

Still, my strongest motivation remained the genetics of Alzheimer's. This led me to author a research paper examining the alternative isoforms of PSEN1, a gene implicated in Alzheimer's pathology. Using the STAR alignment algorithm and genomic data from the National Center for Biotechnology Information, I investigated how alternative splicing patterns might influence protein function in the brain. Conducting this work taught me how computational tools can illuminate hidden layers of biology and gave me a tangible way to connect personal experiences with rigorous scientific inquiry. I went on to continue learning about Alzheimer's through the UCLA Neuroscience High School Scholars Program, the Medical Humanities program with the International Young Researchers' Conference and Columbia, and the Stanford Neuroscience Journal club.

These experiences, from my grandmother's house to bioinformatics pipelines, advocacy campaigns, and public health research, have shaped my approach to both learning and service.

Alzheimer's Disease has become the lens through which I explore science, public health, and community impact. What initially began from the phenomenon of forgetting is now a commitment to remembering. Blending curiosity about neuroscience with opportunities in research and service will allow me to continue contributing meaningfully to the fight against Alzheimer's.

The world is still searching for the first survivor of Alzheimer's. I will help find them.