Ayame Lewis

Ayame Lewis graduated from San Pedro High School. She will be attending Pomona College with majors in biology and Japanese.

Every day, I lost track of time studying various species of bugs in my garden. Ants were my favorite creatures to observe; I found their sense of teamwork particularly intriguing. Occasionally, I dropped bread crumbs for them and watched as they formed large lines and worked together to carry the treasures to their nests. I was amazed by the way they were able to form an organized community. I was impressed by their group intellect and social behavior. Watching them sparked my own curiosity about how different species of animals adapt to the world. Paying attention to the nature around me inspired me to study Biology.

I find interest in small microscopic details of nature, like the life cycle of parasites, the movement in bugs, and the strategies viruses use to take over the human body. I ask questions about the world around me, and I want to build on my interest in exploring the secret unseen world. I wish to study the microscopic world in a lab. I can imagine myself wearing goggles, gloves, and a lab coat looking through a microscope. I dream of attending one of the top small liberal arts colleges as an undergraduate student and then moving on to a big university as a graduate student to get a PhD in Biology. I would conduct research along professors as a student and help publish studies. After I graduate from college, I would stay in a university to continue my life-changing research and hopefully become a professor myself. I want to lead a class and share my passion with others.

As a person who grew up in a low-income single mother household, I have a goal of finding ways to improve health in areas of extreme poverty. I know some of the struggles people in poverty have to face every day as I was once in their shoes.

In the future I hope to explore ways to combat top-killing diseases that affect both humans and animals and are especially devastating in poor regions of the world. One specific case that I hope to improve are diseases carried by mosquitoes. Mosquitoes are one of the most dangerous animals in the world. Although they are small and could be killed by a light slap, mosquitoes are one of the top killers and cause the top deaths.

These blood sucking parasites carry deadly diseases that they transmit onto humans when they bite into our flesh. They can carry diseases such as malaria, Zika virus, and yellow fever. Luckily, there are cures for these diseases that many people in the US have easy access to. The people who are really in danger are the people living in poverty or poorer countries.

People living in poverty cannot afford vaccines and medication. As a result, most of the deaths caused by mosquitoes are in areas of poverty. It saddens me to know that these people are dying from diseases that are preventable and treatable. They have tried so many other cheaper methods such as mosquito nets and DDT, but it did not work as well. Mosquitoes reproduce at a very high rate which helps fasten each new generation to become resistant to pesticides and small mosquito nets are also expensive and can't be used everywhere.

A possible solution that I would take part in is to genetically engineer mosquitoes so that the level of danger they pose to humans would be lowered. As a researcher from one of the top universities, I want to help solve the problem by helping to further the work and coming up with new plans.

I have also suffered from medical problems. In 2011, I was diagnosed with Prolactinoma, a rare disease that causes tumor formation in the brain. It caused delay in growth, partial blindness, and headaches. The IRUD (a Japanese research institution for rare diseases) offered free surgery in Japan in return for medical research. The Japanese neurosurgeon promised that I would get my vision back.

After the surgery, my vision returned like they promised, but I suffer from the side effects of medications that prevent my aggressive tumor from growing back. Major headaches, nausea, and faintness distracts me in my everyday life. Sometimes these complications make it hard to focus in really bright or loud environments in school and I often must miss class for important doctor appointments and medical imaging. However, my health challenges pushed me to become a stronger individual.

I never knew how important each little function of the body was before I almost lost them. I feel proud for being able to change my view on life. Others cannot always see the pain and struggle I've endured beneath my bubbly, outgoing nature. It cloaks the scars---physical and emotional---from having an abusive father, from enduring a serious illness, from living in poverty, and from being bullied by my peers for looking and talking differently. Observing my mother's strength in raising me by herself, finding my own strength to face the recovery process, and relying on the kindness of neighbors when we couldn't afford to buy enough groceries showed me the everyday magic found within others and myself. Now, I wake up early in the morning, so I don't miss the sun coming out. I go outside, so I don't miss the world moving, and I make sure to spend time with my mom and cat, so I don't lose the precious time we have together. I cherish life and nature, and hope to study both further to uncover ways to give back to it.

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UPDATE FROM GLA SCHOLARSHIP RECIPIENT

Ayame Lewis

AYAME LEWIS, 2020, attends Pomona College

Hello,

Thank you so much for thinking of me! I am doing great, although I do admit that my freshman year over zoom was difficult and something that I needed time to adjust to. I was selected to become a Japanese Liaison for my upcoming sophomore year; I will be working closely with my college's Japanese department in hosting events and information sessions. I also made new friends over my Zoom classes and we were able to support each other in study groups. Meeting new people and professors helped guide me to a new career path; I am hoping to graduate undergraduate and go straight to graduate school to get a PhD in Biology and work with disease research companies.

Hope we are still able to keep in touch the next year!

Thank you, Ayame