

Meet Your Scientists from the Broad Institute!

Elise Valkanas



Elise is a computational biologist, which means that she uses the incredible power of modern computers to tackle difficult questions in biology. As computers have become more and more powerful, scientists have been able to look at huge amounts of data to find patterns and answer interesting questions. In Elise's case, she studies the DNA of people who are sick to try and find patterns that could reveal which parts of the DNA are responsible for causing their disease. Elise thinks her work is exciting because she likes providing people with an answer for why they are sick, which is often comforting for them. She also gets to travel a lot and learn about cool science in other parts of the country and world.

In her free time, Elise enjoys rock climbing. Her favorite sports team is the US women's national soccer team, and her favorite food is pasta.

My question for Elise is: _____

Patrick Brehio



Patrick works in a field called virology—or the study of viruses. He thinks virology is both fascinating and terrifying. Viruses are unlike any other organism on Earth and are the closest thing to alien life in Patrick's eyes. Viruses are responsible for a lot of major health concerns around the world, including ebola, zika, and the flu to name a few. Patrick's job is to study the genetic codes of these viruses to try and understand how they infect humans and if there are any weaknesses that can be exploited. Patrick wanted to be a part of this field because he believes in using his education and knowledge to improve the lives of people around the world. He is also genuinely interested in viruses as a whole, so being able to do what he loves and make a difference is something he truly feels great about.

Outside of the lab he enjoys listening to music, dancing (hip hop and RnB), traveling, drawing, and spending time with family and friends.

My question for Patrick is: _____

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Aaron Lin



Aaron became fascinated by viruses while participating in a high school science fair. Viruses are tiny compared to our human bodies, and are incredibly diverse. Aaron likens a virus invading your body to a lone spy like James Bond or Jason Bourne single-handedly taking over an entire army base full of troops and tanks. Aaron studies a special category of viruses called RNA viruses, which are unlike all other viruses because they use RNA instead of DNA to store information. This one difference allows them to mutate faster than other viruses, sneak past your immune system defenses, and even shut down your cell's natural machinery. The recent epidemic of Ebola in West Africa was caused by an RNA virus. The goal of Aaron's work is to understand these viruses and their weaknesses, and to figure out ways to keep them from making more people sick.

Aaron has many fond memories of 8th grade, but one that stands out is when his chemistry teacher covered his own hands in a special solution to protect them, and then lit them on fire! When he's not working in the lab, Aaron likes to watch baseball, especially the Oakland A's.

My question for Aaron is: _____