Lowell Milken Center for Unsung Heroes
ARTEFFECT

Impact Statement

Aima Bhatti**,** Grade 12.
Cure for Beriberi*,* 2020.
Colored pencils, marker on paper, 12 x 9 Inches.
Hopewell Valley Central Highschool, Pennington, NJ
Unsung Hero: Robert R. Williams

Robert R. Williams discovered thiamin, which he then proposed as a cure for beriberi. Beriberi is a disease that causes inflammation-- or swelling-- of the nerves and causes heart failure. It can also cause people who are suffering from it to not be able to stand. This is where its name comes from; “Beriberi” literally means, “I can’t, I can’t,” which refers to the people affected not being able to stand. The disease is caused by a poor diet and alcoholism. Williams witnessed hundreds of children and adults suffer from beriberi when he was only a child in India. He carried the images of the sufferers of beriberi throughout his life and eventually decided to make it his goal to find a cure. He joined the U.S. Chemical Warfare Service as a chemist at the start of the first World War, and he built a lab in his home so that he could test his hypotheses on birds and rats. He determined beriberi was a nutritional deficiency and eventually came across thiamin. He identified thiamin as an anti-beriberi substance that was found in rice husk. He started synthesizing the chemical compound so that it could be tested as a cure. He tested thiamin on a population of rats that were dying from the disease, and eventually, he found that his tests were successful. He applied for a patent for thiamin, and soon thiamin was provided to patients suffering from beriberi.

Robert R. Williams’ life appealed to me primarily because he was a scientist-- a chemist-- who wanted to dedicate his life to helping others. Chemistry is my favorite subject and because I want to be a physician when I am older, I also want to dedicate my life to helping others. In this way, I connected with Williams, and I wanted to tell his story through artwork. I created a colored pencil drawing on tan toned paper to make the colors pop out more. The drawing features an Erlenmeyer flask that is being tipped over by a mouse trapped inside the flask. The background is blue and red drawings of the molecular structure of thiamine. I chose to draw a mouse in an Erlenmeyer flask because of the fact that he tested thiamin on a population of rats. I decided to make the molecular structures of thiamine both red and blue to symbolize veins and arteries (blue veins, red arteries) because beriberi can cause heart failure.

While doing my research and completing this piece of artwork, I learned a lot about someone I had never heard about. I was able to connect with this long-dead man through the art that I created. This project has helped me to understand that it’s important to go and discover things on my own rather than always being told what to learn and what not to learn. There is always something new to discover, and without putting in the effort and having that genuine curiosity, you’ll never learn unexpected things. And, in my opinion, learning is all about becoming familiar with the unexpected.