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J. Michael Bishop: A Scientist for the Next Generation

My legs were starting to ache from standing by my research poster for nearly ten hours.

I was anxiously awaiting the possibility to speak to my biggest role model, J. Michael Bishop. I heard rumors from countless other students who had previously participated in Intel International Science and Engineering Fair (ISEF) that the Nobel Laureate walks around from poster to poster to speak with students during the Public Showcase Day. However, they said he usually only goes up to posters of students who scored highest the previous day of judging. I did not believe that I had done well during the judging sessions and was disheartened at the thought that I might not have the opportunity to meet my scientific hero.

At the age of eleven, I first learned Dr. Bishop's story. This was around the same time my mom had been diagnosed with cancer, and I had made it my life goal to study her disease. However, I had no means to pursue a career in science. As a Latina, with neither of my parents as scientists, I had no one to pave a path for me to follow.

With encouragement from my mom's doctors, I started learning the basics and foundations of cancer biology. And that was where I came across Dr. Bishop's paradigm-shifting scientific discoveries. However, very quickly, I learned that Dr. Bishop's contributions to science extended far beyond his discoveries in the lab. Every year, Dr. Bishop serves as a mentor and speaks as part of a panel at the ISEF poster session.¹ He speaks about his childhood and how he had hardly been exposed to science. Throughout his college education, he never imagined himself as a scientist. He had even been denied entry into countless labs due to a lack of prior experience. He had an ambition to become a scientist but lacked the guidance to visualize his future career. Over time, however, he developed relationships with mentors who believed in him. More importantly, he learned how to believe in himself.²

I found inspiration in Dr. Bishop's goal of becoming a scientist along with his willingness to be open and vulnerable, often giving talks about experiencing self-doubt. Dr. Bishop is a role model for anyone—like me—who comes from an unconventional background to persevere and work through self-doubt to pursue a career in science. After learning Dr. Bishop's story, I realized that there is no exact mold that curates the development of a scientist, and I became more determined to continue studying cancer biology. I also became determined to keep sharing his message with the generations of scientists who will follow me.

All of this was weighing heavily on my mind as I looked up for a moment and realized that Dr. Bishop was inches away from the aisle of posters nearest to mine. At fifteen years old, I ran up to my hero—asking him to come to my poster even if I wasn't on his list. He was kind enough to spend almost an hour inquiring about my research and ultimately my goal to pursue a PhD. I made a point to convey to him my self-doubt given my background and how learning

about his story of discovering that science was right for him gave me direction. Dr. Bishop looked me in the eyes and made it clear to me that my background was a strength, something that I hold onto to this day.

After this experience, I continue to draw inspiration from him throughout my scientific journey, especially when I face obstacles, such as difficult classes or failed experiments. Seven years after meeting Dr. Bishop, I currently have the privilege of pursuing a PhD in Cancer Biology. My path continues to mirror his, as I find guidance in how he handled the uncertainty he faced but also the value he places on mentoring young minds. I am devoting my scientific career to mentoring high school students.

Throughout my career, I have mentored high school students from underrepresented backgrounds through science experiments and projects. I have found value in developing leadership workshops for younger undergraduate students to inspire introspection and career goal-setting. I have even served as a judge for some of the same science competitions I participated in during high school. I am devoting my PhD and scientific career to mentoring students from underrepresented backgrounds through teaching, guiding them through their own research projects, and openly sharing my own story, just as Dr. Bishop has. I aspire to keep paving new paths and to become a role model to other young minds, inspiring them to turn to science and critical thinking to solve problems inflicting themselves, their families, and their communities.

Works Cited

1. *Persistence, Resilience, and Adaptability: The Qualities of a Scientist* | *Society for Science & the Public*. <https://www.societyforscience.org/blog/persistence-resilience-and-adaptability-the-qualities-of-a-scientist/>. 28 Mar. 2020.
2. J. Michael Bishop – Biographical. NobelPrize.org. Nobel Media AB 2020. <https://www.nobelprize.org/prizes/medicine/1989/bishop/biographical/>. 28 Mar 2020.