



BIOAGRICULTURAL SCIENCES  
AND PEST MANAGEMENT  
COLORADO STATE UNIVERSITY

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This was my second time applying to the GRFP. The first time I applied to this fellowship was during my final undergraduate year here at Colorado State University. My application got very good reviews, but I did not receive the fellowship. However, I applied the following year, my first year of graduate school, using the same proposal idea and was awarded the fellowship. My research proposal was interested in exploiting the native components of the *Arabidopsis thaliana* microbiome that produce cytokinin and auxin to improve the growth and productivity of the plant.

Working through the research component of the proposal involved some key members of faculty here at CSU that I would like to give recognition to. The main person I need to thank for working with me for two years and countless hours on this proposal is Dr. Cris Argueso, who is my PhD advisor. Even though I came up with the idea of using the microbiome to improve plant growth, I had little knowledge as to how to accomplish this project. She helped me by teaching me about proper scientific techniques, leading me to other faculty members with knowledge she lacked, and pushing me to get involved with my community. Through her mentoring, I worked with Dr. Matt Wallenstein to construct a key component of my proposal, which involved validation of my scientific project, as well as taking my research to a marketable business product. She also pushed me to develop very strong broader impacts, a key component of the NSF GRFP application and get involved in my community. This led me to become a member of the BSPM Student Liaison Committee and a member of the Cell and Molecular Biology Student Association, as well as become an Ambassador for the American Society of Plant Biologists. Without her pushing me to expand my own knowledge, my networking through campus, and my involvement in the scientific community, I do not think I would have received this fellowship.

In addition, I also attended two classes last fall that involved writing and reviewing grant proposals. One of those classes (Fundamentals of BSPM) was taught by Dr. Courtney Jahn and Dr. Andrew Norton. In this class, each student wrote a grant proposal, reviewed others, and held a mock panel to discuss the proposals. The other class, Grant Writing, taught by Dr. Stuart Tobet also had the same components of the BSPM class, but much more in-depth, with grant review panels lasting 4 hours for two different sessions. Both classes allowed me to get feedback from various members of the scientific community, which allowed me to fine-tune the research aspect of the proposal.

In my opinion, the main reasons I received this fellowship is because my dedication to science stood out beyond the research portion of my application. I made efforts to join organizations so I could be involved in my community locally as well as nationally. I also volunteered in a STEM outreach program at a local elementary school. I constructed my research project to involve other members of the CSU faculty besides my advisor as well as citizen scientists throughout the country. I also displayed a strong ability to be able to manage multiple responsibilities at once which included schoolwork, research, and a job. I spoke about my ability to problem solve during scientific roadblocks. All of these aspects of my proposal were highlighted in the reviewer's critiques which I feel is important to highlight to my community here at CSU.

If any student or advisor would like to know more about my preparation or what I included in my proposal, feel free to contact me. I would love for more Agriculture students at CSU to receive this honor and funding.