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Mr. Eric Reinsvold
Cargill Specialty Seeds & Oils
2540 East Drake Road
Fort Collins, CO 80525

Dear Mr. Reinsvold:

As you know, my name is Brenna Youmans and you are sponsoring both my academic and research during my participation in the 2016 Frontiers of Science Institute. Since we have last been in contact, I have been to many more classes, guest lectures, and hands on research time. At the very beginning of the program, I was already making friends and developing new skills with all the knowledge I was soaking in. However, now I have friends who I feel I have known my entire life. They are smart, funny and just a blast to be around. My skills within a laboratory have also grown tremendously—hand me a pipette and some sample tissue and I am off to work!

The classes I continuously attended have covered so much fascinating material and have improved my knowledge in many subjects, such as mathematics, computer science, pathology, and exercise science. The teachers for the program are dedicated and continue to amaze me with new knowledge. Although classes are over now, I was always so ecstatic to attend class each morning.

Not only was I enrolled in a variety of classes, but I also had the opportunity to listen to multiple guest lectures. These were the highlight of my day since most guest lecture classes were on topics I had never even heard of. Some recent guest lecture speakers recently taught about particle physics, buoyancy, volcanology, criminal investigation (blood spatter), and relativity. As you can tell these cover a variety of STEM based topics.

Outside of class, I have been working diligently on my research project, “The Effects of Creatine on Doxorubicin Induced Myotoxicity”. Doxorubicin is a chemotherapy drug that decreases the function of a person’s skeletal muscle. With this in mind, we were trying to prevent these effects by supplementing creatine, an antioxidant. I have completed my 5 weeks of research, gaining many valuable standard laboratory skills. After the methods portion of my project was completed, our research team determined that the results were unknown or inconclusive. This was due to either a mechanical or chemical error that occurred in the last few steps of our project. We were able to predict that it is likely that we used outdated chemicals or a non-functional machine. Although we were unable to calculate exact results, we were able to hypothesize that creatine would have a positive effect on skeletal muscle

based on previous studies. The research we were able to conduct was jaw dropping and incredible for a 16-year-old! I have never been able to perform such hands on and advanced science techniques since it is above any high school curriculum. So I would just like to thank you endlessly for allowing me to have this rare opportunity.

On top of the astonishing lab work, I was also able to tour many companies including the Fort St. Vrain Generating Station (Xcel Energy), Seagate Technology, CSU School of Biomedical Engineering, CU Fiske Planetarium and Observatory, SparkFun Electronics, and NCAR. The wide variety of industrial visits opened my eyes to all my possible future opportunities. Overall, these were packed with hands on demos and very inspirational tours!

My peers and I just concluded our live PowerPoint presentations. Although it was a little nerve racking to stand in front of such a large audience and present, it was so fun getting to share our amazing research with the viewers!

We also spent a good amount of time preparing for a cardboard/duck-tape boat race across a pond at the Swift Ponds location! The dorm area has been packed with massive sheets of cardboard and finished boats. It was a very fun and collaborative project that got everyone thinking creatively!

In total, the Frontiers of Science Institute has been a life changing event that I will cherish forever. Your investment in me allowed me to have this opportunity to expand my knowledge and I am so grateful for that. My gratitude for your sponsorship is infinite and I can't wait to share all the amazing things I have done with my family and peers.

If you have any questions about my project, you can contact me through my email, listed at the end of this letter. For more in depth information about my project you can check out my website, which will also be listed below. Thanks for all you have done to help expand my horizons!

Thank you,

Brenna Youmans

2016 Cargill Specialty Seeds & Oils Scholar

Email: Removed for privacy purposes

Website: <http://youmans-fsi-chemo.weebly.com/>