# ANSC Undergraduates Conducting Research



Catherine Cabano, an ANSC junior undergraduate student and member of the Honors Program, has spent time working with both **Dr. Dennis D'Amico** and **Dr. Richard Mancini** since February of her sophomore year. Catherine has a strong interest in the food science field and is pursuing a minor in the food science department.

Dr. D'Amico's laboratory is focused on improving the safety and quality of cheese, specifically in regards to Listeria monocytogenes. which is a bacterium known to cause foodborne illness listeriosis. Listeria is specifically dangerous for pregnant women, newborns, those with compromised immune systems, and the elderly. It can cause stillbirth, miscarriage, premature delivery and lead to a life-threatening infection in the newborn. The bacterium has a twenty percent mortality rate. Listeriosis also can cause fever, muscle aches, confusion, loss of balance and sometimes cause gastrointestinal problems. It grows extremely well in refrigeration temperatures and is more common in ready-to-eat foods, such as hot dogs, deli meats and pre-prepared deli-salads.

In Dr. D'Amico's lab, Catherine worked with graduate students to determine the survival of Listeria in cheese brines and develop potential interventions. She also assisted with projects working to create natural ways using antimicrobials to prevent the spread of Listeria on dairy products, specifically in regards to a potential film that can be used with cheese to prevent contamination.

Catherine is working with Dr. Mancini on her honors thesis project, which compares the quality of beef with marketing claims of grass-fed, naturally weaned, locally slaughtered, and no added-antibiotics with traditionally-marketed beef. Marbling, tenderness, as well as raw and cooked color will be measured. After graduating from UConn and completing her research, Catherine plans on attending graduate school to pursue a master's degree in food science.
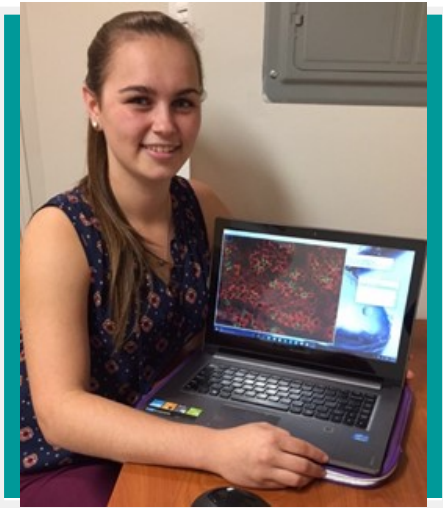
**Olivia Catarino**, an ANSC senior undergraduate student, has been working in **Dr. Sarah Reed's** lab since the fall of her sophomore year. She originally started assisting on a maternal nutrition sheep study, which included work at the barn and some in the lab. At the barn, she helped with feeding, blood collection, and lamb checks. While in the lab, she separated connective tissue from the fetal lamb muscle for satellite cell isolation.

In her junior year, she assisted with data collection for the same study. She utilized a cryostat to slice cross-sections of the fetal sheep muscles to make slides. The slides were then stained to identify different muscle fiber types. Finally, the slides were photographed with a microscope for data analysis. Currently, she is helping with the data analysis by calculating the average cross-sectional area of the different muscle fibers types.

She has also had the opportunity to assist with a few other projects such as Dr. Reed's ultrasonography project with different aged horses, and the polo horse project which monitored heart rate during and after the game. Working in Dr. Reed's lab has given her a greater appreciation for research and a better understanding about the amount of time and effort that is required. After graduating from UConn, she hopes to attend veterinary school and pursue a career in equine medicine.