



DEB Student Spotlight on Marcus Deloney and Alena Casella (Alyssa Panitch lab)

Many thanks to DEB (Designated Emphasis in Biotechnology) students **Marcus Deloney** and **Alena Casella** for agreeing to participate in a lab photo shoot. Both Marcus and Laney are in the Biomedical Engineering graduate group. I would also like to thank their PI, **Professor Alyssa Panitch** (also a DEB faculty member), for allowing me access to her lab located in the Genome Center for the photos.

Marcus and Laney provided the following information below regarding their current research.

Marcus Deloney



"My lab focuses on biomimetic therapeutics for medical treatments. My project addresses the delivery of our biological therapeutics by using nanoparticles. Biomimetics are a classification of therapeutics that are derived from naturally occurring components of the human body, i.e. peptides and glycosaminoglycans. The issue with using peptide therapeutics is the body readily degrades too fast for them to be therapeutically relevant. To address this problem, I have developed a hollow, degradable, thermosensitive nanoparticle to deliver the peptides to the tissue of interest, specifically osteoarthritic cartilage."

"My project is a small scale drug discovery trial from synthesis, testing, and eventually animal trials that combines my favorite aspects of being a scientist and interests: organic polymer chemistry, mass transport, and clinical applications."

Alena Casella

"I am a second year graduate student in the biomedical engineering graduate group and I am co-advised by **Dr. Kent Leach** and **Dr. Alyssa Panitch**. My project, which is highly collaborative between the two labs, is focused on developing electrically conductive peptides that can be combined with natural materials to facilitate nerve regeneration. These findings are intended to lead towards the development of strategies to re-innervate engineered tissues--such as replacement bone and muscle for that which may be lost due to military, civilian, or medical trauma--and enhance their functionality."

Stay tuned for the next DEB student in the spotlight post!



If you are a DEB student and would like a photo shoot in your lab, feel free to contact me to set one up!

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