

In September 2022, GWIS provided me the opportunity to attend the EMBO Workshop on RNA 3' end formation and the regulation of eukaryotic genomes in Oxford, England. The first meeting in this series took place in 1989, and subsequent meetings took place every four years. Considering the limited opportunities to attend this meeting, I received the honor of presenting a poster on my project, "Identification and structural basis of a potential licensing factor of the Integrator cleavage module." I work in close collaboration with Dr. Liang Tong of Columbia University. We identified BRAT1 as an interacting protein of the endonuclease of the Integrator Complex. The Tong laboratory solved the cryo-EM structure of the two proteins, revealing that BRAT1 structurally inhibits the endonuclease from cleaving its substrates. Interestingly, functional studies that I have performed show that BRAT1 is also required for proper Integrator function. At the meeting, I met with Liang in person for the first time. Sharing meals and discussing the next steps of my research with him and my PI has motivated and encouraged me to push to the next level.

The meeting included a captivating combination of cutting-edge 3' end processing research and an overview of the rich history of our field and Oxford itself. This gave me great inspiration for my own work, as well as a glimpse of part of the RNA field. One of the most exciting aspects of the meeting was listening to talks from numerous excellent labs studying Integrator. I enjoyed getting to meet and discuss details of the protein complex with PIs whose labs are working on similar projects, as well as developing at least one collaboration. I found talking with other trainees studying the Integrator complex very rewarding. Discussions with researchers who are intimately acquainted with the specific proteins I study encouraged me in my work. These researchers were able to question my proposed model from different angles, which allowed me to further develop my own ideas. Several of us are staying in touch, and I hope we can continue to benefit from our interactions.

The opportunity to witness the comradery in the field that has grown over the past few decades also provided encouragement. The opportunity included meeting and hearing from several labs whose work I learned about in my undergraduate classes. Learning about their current work and what new science is most interesting to them stoked excitement for my own work. The experience helped to solidify some of my future career aspirations, as well as forging connections that will be beneficial in the future. Overall, the experience was very rewarding personally and scientifically. Thank you to GWIS for supporting me in this incredible opportunity!