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University of Rochester Graduate Women in Science Supported Travel Award
Keystone Symposia in Chromatin Architecture and Chromosome Organization, and Gene Control in Development and Disease, Whistler, BC, Canada
March 23-27, 2018

I would like to thank Graduate Women in Science for supporting my travel to Whistler, British Columbia to participate in the Keystone Symposia dual conference in “Chromatin Architecture and Chromosome Organization” and “Gene Control in Development and Disease” from March 23-27, 2018. The Keystone conferences encourage presenting cutting-edge research, which was in abundance with almost 700 attendees from across the globe sharing their data, some of which were analyzed mere days before the event.

I learned a staggering amount during the conference and heard numerous talks by some of the biggest labs in the chromatin field. Richard Young and Phil Sharp presented on how phase separation controls transcription and genome architecture, with many other talks providing supporting evidence on this new concept. Job Dekker and Leonid Mirny proposed a new model of how chromosomes reorganize throughout cell division. But most surprising was the discovery that enhancers and promoters do not have to be in contact for transcriptional activation to occur, according to data from the Bickmore and the Lomvardas Labs. This novel finding strongly contradicts the very popular “looping” mechanism of enhancer action, which posits long-range interactions between enhancers and promoters facilitated by large DNA conformational changes.

I had the opportunity to present a poster titled “Dissecting the Function of Domain-forming Transcriptional Enhancers” in one of the four sessions. My work bioinformatically and functionally compares two classes of enhancers: the domain-forming enhancer, and the super enhancer. It was great to hear feedback from researchers throughout the field confirming our findings that the grouping of enhancer elements to define a super enhancer can be arbitrary, and these super enhancers are not functionally different from a strong typical enhancer. I was also able to make a connection with a researcher who also observes the domains we are studying in his data sets. I am hopeful that this connection will lead to a future collaboration.

The diversity of the attendees at this conference allowed for a variety of perspectives on future career opportunities. Many labs announced postdoctoral positions during presentations or through the smartphone app that facilitated conversations among all conference participants. There was also a panel of 18 editors from many of the Nature and Cell family of journals, as well as other journals, who sat down with the attendees so we could converse in small groups about how each journal’s policies differ, the intricacies of the publishing process, and what day-to-day life looks like as an editor.

I could not have asked for a better conference experience. I learned about new and amazing science, met scientists from many different backgrounds, and had wonderful conversations that have given me a new perspective on my own research. I want to thank GWIS again for providing me with this invaluable opportunity.