

Marie Rossi - GWIS Travel Award Follow-up

The Graduate Women in Science Travel Award made possible my attendance at the Cold Spring Harbor Eukaryotic DNA Replication Meeting in September of 2005. The meeting was an arena for discussion of the mechanisms of DNA replication and repair and how those mechanisms function to maintain genomic integrity. My thesis work has been directed toward key components of eukaryotic DNA replication, specifically, the study of lagging strand DNA synthesis and Okazaki fragment joining and the various proteins involved in the process. Therefore, it was important for me to participate in this meeting, to learn first-hand about current research and share my work with others in my field of study.

Most of my research has been focused on distinguishing between opposing models for Okazaki fragment primer removal through *in vitro* reconstitution of lagging strand synthesis. My research indicates that removal of the Okazaki fragment primer is efficiently carried out by coordinated action of the lagging strand enzymes DNA polymerase δ and its processivity factor, proliferating cell nuclear antigen, as well as flap endonuclease 1. I was chosen to give a talk at the meeting based on the merit of the submitted abstract describing my recent results. The opportunity to present a talk enabled me to share my latest results, as well as hone my public speaking skills with an audience of experts. In order to convey my work in an understandable and interesting manner in the short 12 minute allotted time, I was required to select only the most relevant background information and my most interesting and significant results during preparation of the talk. It was an invaluable exercise for practicing scientific communication. In addition to benefiting from preparation of the talk, my presentation was also a valuable experience for learning the art of anticipating and answering audience questions. The audience of experts provided a new perspective on my research and helped me to consider how my *in vitro* research was relatable to *in vivo* replication conditions.

Attendance at the meeting was also important for making contact with current collaborators in order to get input on my work and discuss any confusing results that I was unsure of how to interpret. Personal interaction with other scientists helped to identify and establish collaborations, as well as discuss new ideas for future experiments related to my project. For example, one collaborator agreed to provide an additional replication enzyme so that my experiments could be conducted in a more physiological context.

Overall the Graduate Women in Science Travel Award supported my attendance at an important meeting in the field of DNA replication during which I gained valuable experience in presentation and review from colleagues, as well as scientific discussion with my peers.