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Graduate Women in Science Travel Award Report
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The GWIS Travel Award funded my attendance and travel to the 2010 American Crystallographic Association (ACA) Meeting in Chicago, Illinois. This was my first time attending the ACA meeting, and additionally my first opportunity to give a talk at a large meeting.

The ACA is a medium-sized meeting with about 800 attendees. Most were x-ray crystallographers or people who work with x-rays in some capacity. For instance, I met the software designer for a crystallography program I use regularly and was able to ask him directly about a problem I was having with the program. It was a great experience to be able to interact with so many other scientists in my field. At the poster sessions not only did I learn about other attendees' research, but I was able to give advice based on my research experiences for the first time.

During the "Exciting Structures" session I presented my crystallographic studies of the redox sensing repressor Rex, titled "Mechanism of NADH/NAD^+ Sensing by the Redox Sensing Repressor, Rex." To investigate the molecular mechanism for NADH/NAD^+ sensing among Rex-family members we solved the crystal structures of *Thermus aquaticus* Rex (T-Rex) *(i)* bound to NAD^+/DNA, *(ii)* bound to DNA, and *(iii)* without ligand. Comparison of T-Rex/NAD^+/DNA with the previously solved T-Rex/NADH complex revealed that binding of NADH releases Rex from the DNA site following a 40° rigid body rotation between the dimeric subunits. This brings about a 22 Å translation in the DNA binding domain leading to a clash with the DNA sequence, so that the dimer can no longer bind the DNA. My talk was very well received and I was asked several questions, all receiving positive feedback. As I gave my talk early on in the meeting, people who had attended my talk approached me much later, leading to very useful discussions throughout the entire meeting.

There were three plenary lectures given by each of the Nobel Laureates that shared the 2009 Nobel Prize in chemistry for the ribosome structure. I really enjoyed having the opportunity to hear Nobel laureates speak. In particular I liked the opening plenary lecture by Dr. V. Ramakrishnan, who detailed the historical aspects of solving the ribosome structure - including setting up over 1200 crystal trays! I also enjoyed going to talks in the different sessions, in particular the Etter Award Symposium where students gave all the talks and the wide range of research covered was very interesting. In addition, I had the chance to broaden my knowledge on x-ray applications by attending a fiber diffraction session.

Overall, the ACA was a great experience, as I was able to discuss research in an informal setting with other students and leading scientists in the field. I was able to speak with investigators whose research interested me and discuss possible post-doctoral positions. This was particularly true at the mentor-mentee dinner I attended where the mentees were able to receive advice candidly from established investigators about the post-doc and job process.

In conclusion, I would like to thank the Graduate Women In Science group for aiding my attendance to the 2010 ACA Meeting. I am truly grateful for the opportunity I was given and the experiences I gained were invaluable.