Graduate Women in Science 2012 Spring Travel Award
Travel Report

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I would like to thank Graduate Women in Science for travel funds to attend the Prenatal Programming and Toxicity III (PPTOXIII) Conference this May 14-16 in Paris, France. This conference focused on early life environment and its impact on health and disease later in life. This topic directly relates to my research, which examines how prenatal activation of the aryl hydrocarbon receptor (AhR), a transcription factor that binds numerous pollutants, leads to alterations in immune function in offspring after birth. At this conference I presented a poster showing that developmental activation of AhR leads to impaired dendritic cell function.

Attending PPTOXIII helped me to think more broadly about the early life environment and subsequent disease. Many presentations focused on early life exposure to pollutants, such as bisphenol A (BPA) or pesticides. Other talks explored how early life nutrition can influence health later in life, an area of research that I knew much less about. The conference highlighted the fact that the fields of early life environmental exposures and early life nutrition are actually closely related, and I benefited from the chance to hear some really great talks about early life nutrition. The presentations were grouped by disease/organ system. In addition to seeing the current state of research in my own field of developmental immunotoxicology, I had the opportunity to learn how the early life environment influences other diseases, such as neurobehavioral disease, cancer and cardiovascular disease. It was certainly interesting to learn about the details of each particular investigator's exposure and disease model. I particularly enjoyed hearing Dr. Alvaro Puga's talk on toxicant-induced cardiovascular disease and Dr. Merle Paule's talk on perinatal anesthesia use and neurobehavioral deficits. However, what was most interesting was taking a step back and considering the totality of what was presented. For me, this really highlighted where the developmental origins of health and disease field is right now. Both human and animal data clearly demonstrate that the early life environment can influence susceptibility to many different diseases later in life. Across the various disease models, researchers are actively trying to determine how this is happening. There was some exciting data presented suggesting that the early life environment alters epigenetic programming, leading to increased susceptibility to disease.

The conference was set up to facilitate interaction between the 250 participants. A new set of posters was presented each day over lunch. This gave me the opportunity to have in-depth discussions with other students, postdocs and faculty members. I really enjoyed the opportunity to present my poster and get feedback from my peers. I also took the opportunity to network and to get career advice from postdocs and junior faculty members. I am really grateful that I had the opportunity to interact with, and not just listen to talks by, the preeminent scientists working in this field.

I would like to thank GWIS again for supporting my travel to PPTOXIII. This conference gave me the opportunity to learn both deeply and broadly about the field of the developmental basis of adult disease. I was also able to network with students and investigators who are driving the research in this field. I am not aware of another conference that would afford me these unique opportunities, and I am grateful that GWIS supported my attendance.