

**Graduate Women in Science Spring 2014 Travel Award Report**  
**Lesley M. Chapman**  
**Laboratory of Dr. Craig N. Morrell**

The 64<sup>th</sup> Lindau Nobel Laureate Meeting was a phenomenal learning experience that truly left a lasting impression. Thanks to support from GWIS, I was able to be a part of this event. The meeting was held from June 29<sup>th</sup> through July 4<sup>th</sup> in Lindau, Germany. This meeting is a longstanding tradition originally established in 1951, and was created to foster the exchange of knowledge between young researchers and Nobel Laureates. As one of 600 young scientists - all selected from research institutions from across the world - we were given the opportunity to attend lectures from 38 Nobel Laureates from various disciplines in Physiology and Medicine. During the meeting, I was also able to establish mentorship opportunities with leading scientists.

Each day of the conference began with lectures from Nobel Laureates, and following each lecture there was a small group discussion with each Nobel Laureate that presented their work. Examples of lectures that I found particularly interesting included: Dr. Elizabeth Blackburn's talk on telomere length and health as well as Dr. Hamilton Smith's talk on building synthetic genomes in yeast and bacteria. Dr. Blackburn's talk was entitled "Adventures and the Ends of Chromosomes", and she shared exciting new discoveries related to the delicate balance of telomere length and the effects this process can have on human health. Specifically, if telomerase activity is lessened due to genetic or environmental pressures, this could have adverse effects such as pre-mature aging or increased secretion of pro-inflammatory cytokines therefore potentiating immune disorders. Dr. Blackburn also described population-based studies that are investigating the environmental factors (i.e.: smoking, psychological stress) that could influence telomere length.

There were other lectures on topics that extended beyond cutting-edge laboratory discoveries. One of which was entitled: "Academia and Industry – Exploring the Collaborative Landscape of the Future". This was a panel discussion led by leaders in industry as well as Nobel Laureates who partner with industry. In this discussion, we learned about an exciting new realm of scientific collaboration taking place between industry and academia, and also the challenges that each group might face. The benefit of increased collaboration between academia and industry was a central topic of discussion. The importance of fostering connections between industry and academia will generate increased opportunities for higher quality publications. The opportunity to redesign clinical trial models was also a key topic of discussion; improvements in this area will allow researchers to generate effective therapies at a more rapid pace. These topics were particularly interesting to me because I was able to bring in knowledge that I gained from a course (Experimental Therapeutics) that I completed through my department – Translational Biomedical Science. I was

able to actively engage in discussions related to the ability of pre-clinical trials to predict the likelihood of a therapy to effectively modulate disease.

Nobel Laureates also shared a great deal of insight on the skill of balancing life in and out of lab. For instance, in his talk entitled: "Where do Ideas come from?" Dr. Oliver Smithies encouraged all young scientists to do what they love, and if science is truly your passion in life then stick with your passion this will in turn serve as motivation for scientists to continue to produce work of excellence.

The leitmotif of the Lindau Meeting is "Educate.Inspire.Connect", and the meeting indeed provided us with ample resources and opportunity to engage in each aspect. I am very grateful for the generous support of GWIS, which gave me the opportunity to be a part of this extraordinary learning experience.