

Final Report

I presented the results of my summer research on the time progression of genes *cdc20* and *bub1* in Zebrafish (*Danio rerio*) oocyte maturation at the poster symposium on September 8, 2011. The poster presentation as a whole went very well. There were many people, including faculty and students, who attended the poster symposium and I was able to talk with many people one on one about my research.

Presenting my research findings at this symposium was much different from my experience last summer. At the end of the previous summer I gave my poster presentation to only a few members of the research community, because I was leaving to go abroad for the fall and wouldn't be able to attend the poster symposium. Not only was my poster presentation last summer in a different setting, but the results of my research last summer were much more optimistic than my results from this past summer. My research over the course of the past two summers has given me great insight into the world of research. The first summer I was fairly confident in the research I had done and thought I observed a pattern of *bub1* gene expression in Zebrafish oocytes. However, much of this summer I spent discovering loop holes in the research we had been doing previously. What I had previously thought was DNA amplification of the mRNA we were studying is not actually amplification in many cases, but residual primers. This discovery has changed a lot of what I understood of my results last summer. These discoveries are an important part of the research process; however it is significantly less rewarding than answering the question I originally set out to explore. Though I'm sure that my research from the first summer is not completely inaccurate there is a lot more for me to do to understand what is happening during Zebrafish oocyte maturation. Clearly, I have a lot of work ahead of me to complete this research project for my thesis. When talking to different people of the community at the poster symposium I found it hard to explain what stage I was at in my research and to describe the problems we had run into during the summer. I definitely felt discouraged when trying to outline my results (or lack there-of) to the people I talked with. The people I talked to at the symposium expected to see more results and were confused when I explained that the results I had originally found were not understood properly and that I was still in the process of doing research. However discouraging this was, I'm always reminded that research does not always work out easily and it takes a bit of effort to understand the process you are studying.

Over the past two summers I have discovered first hand that research is a process and not always straightforward. Rather than being at the end of my research, as many of the other presenters are, I find myself still in the middle of my project. The inaccuracies I have discovered this summer in my research will allow me to move forward with my project. I'm currently continuing this research project in order to write my thesis on my findings before I graduate in the spring of next year. I hope to sort out the issues

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we have been having with DNA amplification and by the spring symposium have better results and an understanding of what is going on during oocyte maturation in Zebrafish.