## **University of Puget Sound**

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Summer Research

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## Identification of Flock House Virus Cell Surface Receptor Protein(s) Using Affinity Chromatography and Chemical Crosslinking

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Presenting my summer research at the symposium was my second time presenting college-level scientific research to faculty, peers and friends, as I also worked on the same project last summer. Despite having last year's symposium experience under my belt, I was still a little skeptical about presenting my findings at first because even though I had worked in the lab nearly every day for ten weeks, I felt that I hadn't actually accomplished all that much. If anything, doing biochemical research for the past two summers has taught me that there is a lot of repetition and a lot of failure involved in scientific research, especially when you're working with living systems. But on the same token, because mishaps are so common, it's extremely satisfying when a procedure is successful and yields promising results. Along that same vein of lessons learned this summer, I learned the hard way a few times how important it is to keep an organized and detailed lab notebook, and to write in it EVERY DAY. It's amazing how easily and how quickly I forgot the simplest things that I was sure I would remember because I didn't write them down right away. I also learned to ask when I was unsure of something – because there's nothing more frustrating than messing up an entire procedure just because you thought your question was stupid and were "pretty sure" you knew what to do. All in all though, I absolutely loved doing research the past two summers and feel that I got so much out of it. Not only did I learn new laboratory procedures and learn more about the research process, I got to know the chemistry faculty better and got to continue working on a project that I was excited about and already had a foundation in from last summer.

Preparing my poster was one of the more difficult parts of the research process for me last summer because since I had never prepared one before and my results were still indefinite so I wasn't quite sure what information to put on the poster and how to organize it. This year I had a much easier time making my poster because I was able to use my poster from last year as a template. However, after looking at other student's posters at the symposium, I realized that I had tried to cram far too many details on to my poster and would have been better off putting more diagrams and pictures instead since no one really ends up reading the entire

poster, especially when you're standing right there to answer any questions they might have. It was exciting to see the variety of other research that students had been working on all summer and very rewarding to have other students and faculty members showing interest in my work. I didn't realize the large sum of all that I had learned over the course of the research process until I started explaining the basics of my research in language that someone without a science background could understand. I noticed that I got very different questions depending on whether or not the person interested in hearing about my research had a science background or not. The students and faculty with science backgrounds asked more specific questions about procedures and wanted more depth of information regarding the figures I had to show my results. Whereas those that didn't have much of a science background were more interested in the big picture of my research. They wanted to know what I was doing (generally) and why I was doing it (what was the practical application). To summarize, viewers with a science background wanted information on the details, whereas viewers with less of a science background simply wanted to understand the big picture so that they could see why my research was important. Surprisingly, I almost had more trouble answering the broad questions in a clear, concise fashion than the nitpicky detail questions. Looking back, I think I can identify a few reasons as to why this was so. First of all, personally I do have a tendency to focus on the details rather than the big picture, and since I had spent my entire summer tinkering with the fine details of my research, I hadn't thought about how it all fit into the big picture in awhile. In addition, the reality is that the practical application of my research is very far down the line and currently the immediate goal is simply to better understand virus host-cell entry. Although it's still very important and applicable, its not some vibrant breakthrough that I think some of the people without a scientific background were expecting. All in all, presenting my research at the symposium made me feel proud of all that I had learned and accomplished, but also made me acutely aware of all there was left to discover.