

## **Statement of Purpose**

I first realized I wanted to work in the healthcare industry during the spring of 2000. I was finishing my Chemical Engineering and Material Science curriculum at U.C. Berkeley while working part-time in the Sales Training department at Élan Pharmaceuticals. My group had been training a class of new sales representatives for the past few weeks. On the last day of training, the vice-president, Francine, came in to meet the four newly-hired sales reps. One of the sales reps asked her why she worked so hard, observing that she was always the first in the office in the morning and the last out at night. Her response was that when she retired, she wanted to leave a lasting legacy – to have led the company in finding a cure for Alzheimer’s disease. All the other drugs in the company’s portfolio had been developed solely to fund the research into Alzheimer’s. When she retired, she wanted the satisfaction of knowing that her work had possibly saved the lives of her parents and friends. She confessed that this “Legacy Factor” was what inspired her. It inspired me as well.

I work in the healthcare industry because it allows me to improve the quality of peoples’ lives. Even when I was working as a Training Coordinator at Élan, I felt, as Francine did, that I was contributing to finding the cure for Alzheimer’s. Everyone in the company felt similarly; we were all doing our part so that the company could continue its research. I want to contribute in this same way to other companies. I want to create my own legacy of helping people. I don’t know specifically where I’ll leave this legacy, but increasing my technical expertise is the best way to achieve my goals.

The majority of my engineering experience has involved working on various process optimization projects. At Advanced Fibre Communications I redesigned the primary production

floor to support Just-In-Time manufacturing. As an intern at Bayer Pharmaceuticals I worked on process mapping activities in our central production building to evaluate Water-for-Injection (WFI) consumption, evaluating our ability to meet future production demands. I process-mapped the production activities, created production schedules to show how WFI was consumed during a given interval, and worked with my team to evaluate possible improvements in these processes. I then created new production schedules to show how WFI could be saved with our suggested process improvements. After being promoted to a Quality Engineering position at Bayer, I became part of a multi-site team that analyzed and resolved compliance issues that had caused the FDA to shutdown production at our facility. Drawing on my engineering knowledge, I analyzed Bayer's quality control of their facility/utility systems, then developed and implemented a plan to bring our systems into compliance. Currently I'm working with a Project Engineering team to design and build a new sterile filling and freeze-drying facility. In this project I've had the opportunity to work on equipment and process designs and to research the details of validation and manufacturing.

I want to further my education in Biochemical Engineering so that I can become a more effective Process Engineer. I've been working at Bayer since I graduated from U.C. Berkeley in the spring of 2001. While working at Bayer I've continued my studies, taking courses in chromatography separations and biochemical engineering. I'm most interested in pursuing studies that will develop my abilities to participate in process development, analysis, and optimization. Your Chemical Engineering curriculum, especially your courses in Protein Biotechnology and Advanced Biochemical Engineering, are the reason I'm particularly interested in pursuing a Masters of Science at Stanford University.