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ChemE 3010

Presentation by Todd Zion on March 3, 2014

Last week, Dr. Todd Zion shared his experiences after graduating with a B.S. in Chemical Engineering from Cornell in 1997. Dr. Zion chose industrial employment before obtaining his Ph.D. At the time, the economy was robust and the job market was booming. Dr. Zion also had a case of "education fatigue"; his undergraduate studies tired him and he wanted to gain practical experience in industry. However, the preparation for leadership involved with obtaining a Ph.D. still attracted him to this path. Ultimately, Dr. Zion joined Eastman Kodak Company as a polymer development engineer from 1997 to 1999. Afterwards, he attended M.I.T. to get his Ph.D. in Chemical Engineering, where his interest in insulin treatments began. This led Dr. Zion to found SmartCells Inc., becoming the Co-founder, President, and CEO.

Dr. Zion's goal for SmartCells Inc. was to create a product that would help decrease the frequency of insulin overdose. He wanted to create an insulin-sugar conjugate that is active at high glucose concentrations and inactive at low glucose concentrations. Dr. Zion ensured that the proper patents were filed before proceeding with animal trials. After successful animal trials, Dr. Zion received approval for human clinical trials. However, Dr. Zion wanted a large pharmaceutical company to oversee the human clinical trials for the product for financial purposes. Only large pharmaceutical companies can afford the 1 billion dollar costs to finish clinical trials. In 2010, Merck acquired SmartCells Inc. after Dr. Zion ensured his team at SmartCells would be protected by large bonuses and stock options after the acquirement.

Given his success, Dr. Zion wanted to impart as much wisdom and advice as he could. He recommended participating in undergraduate research and developing key faculty relationships. Dr. Zion also recommended taking the GRE's during a student's undergraduate studies if he or she planned on getting a Ph.D. This ensures that the material as well as the ability to study is still fresh in the student's mind. Dr. Zion went on to explain why he believes a Ph.D. is more valuable than an MBA. Business sense and experience associated with an MBA can be learned on the job or on your own. Alternatively, a Ph.D. grants leadership to individuals in Research and Development, opens up the possibility of teaching as a professor, and also teaches technical self-reliance. However, Dr. Zion warned against getting a Ph.D. for the wrong reasons. He advised against seeking a Ph.D. for better pay or more prestige.

Dr. Zion's presentation was insightful and informative. He shared an in-depth understanding of the entrepreneurial process and lucidly explained the process of starting a company. Dr. Zion's mastery of the material was evident as he did not need the slides and left plenty of time for questions. He was also comfortable presenting and spoke clearly. For me, the most important thing that I've taken from his presentation is that students spend 4 years in college deciding their interests, but their working career is usually over 40 years long, leaving plenty of time to change their minds.

Reviewer: Zach Wu

Superb memo - comprehensive content and great grammar!