

Tiffany D Rau, PhD

### Fermentation: From Discovery to Commercialization

The path from discovery to commercialization of a biopharmaceutical/pharmaceutical product is often challenging and very long but very rewarding for all involved including our patients. This seminar will discuss the path a biopharmaceutical often takes from the discovery lab to the manufacturing facility and finally to the patient.

As we go on this journey different aspects will be highlighted such as...

1. How does one use an organism such as *E. coli* to make a medication? – Fermentation Development
2. You want us to make how much!!!??? Theory, challenges and rewards of scaling-up a fermentation process.

Dr Tiffany D Rau completed her undergraduate degree in Chemical and Biomolecular Engineering at the University of Pennsylvania (UPENN) and went on to receive her doctorate in Chemical Engineering at Vanderbilt University where she focused on increasing monoclonal antibody production levels and identifying the “bottlenecks” in the process and scale-up. Dr. Rau is also a certified Six Sigma Black Belt. Dr. Rau is an expert in DoE, upstream process development, scale-down/scale-up, and international technology development and transfer. She has worked on processes that are as varied as the biotechnology industry itself ie microbial processes to stem cells. Currently, Dr. Rau is at Eli Lilly in Puerto Rico where she is the technical/scientific lead for fermentation and isolation for Research and Development and Manufacturing activities. Dr. Rau is also active in academia. Currently she is an Industrial Consultant at UPENN and at Vanderbilt University in the Chemical and Biomolecular Engineering Departments and is also on the External Academic Advisory board for the Chemical and Biomolecular Engineering Department at Vanderbilt University. She also is a lecturer/Consultant at City College in San Diego, CA. Dr. Rau is also active in many engineering and scientific societies and has spoken at and organized sessions at conferences globally. She has been named the 2015 Program Chair for RAFT (Recent Advances in Fermentation Technology).

