Recently a FDA scientist stated that Modeling and Simulation (M&S) "will play a key role in reducing late stage clinical trial failures", and "will be a critical path for 100% drug development programs". Despite the demand for M&S in clinical drug development, training M&S scientists is challenging because the job requires knowledge of clinical pharmacology, statistics/mathematics, and computer programming, as well as communication skills to benefit from other experts and to discuss with drug development teams. Above all, M&S requires practical problem-solving experiences to know what kinds of problems can be solved, and which method to achieve a high-quality and timely answer. For this reason, an internship experience at a pharmaceutical company is an efficient way to train talented modelers. Ideally the internship would address a real drug development problem, would be supervised by an experienced M&S modeler, and would have a plan for completion within a 2-3 month timeframe. This talk will highlight common challenges, and describe several internship projects that have helped talented modelers become valuable members of M&S organizations.

References