

Challenges of Antibiotic Drug Development in the 21st Century

**Karen Bush, Ph. D., Distinguished Research Fellow, Johnson & Johnson
Pharmaceutical Research & Development, Raritan, NJ**

Antibiotic drug discovery and development are facing a number of challenges, due, in part, to the recent reliance on high throughput screening with suboptimal compound libraries. Proposals to use specialized libraries based on natural products are circulating. Medicinal chemists are using crystallography and computer-based drug design more frequently to enhance the properties of those compounds identified from screening libraries. In addition, large companies continue to search for candidate antibiotics that can be in-licensed from biotechnology or academic laboratories. As always, regulatory and commercial considerations play a major role in the decision for a company to proceed with the development of a new agent.