

2003 Fall Symposium Review

By Karen Steinmetz

The title for the 2003 GETA Fall Symposium was “Infectious Diseases – from Discovery to Drug Development to Biodefense.” Five speakers presented very different aspects of this theme. We started the morning with Dr. David Wang (UCSF) who gave a comprehensive presentation which included a review of viral DNA microarrays that contain up to 28,000 elements derived from over 1000 viral genomes. These arrays were used to positively identify and classify SARS as a “...previously unrecognized virus from the coronavirus family...” within one day of receipt of the samples from CDC. On the other side of the exposure spectrum, Dr. Richard Hector (UCSF) presented the Valley Fever Project, an orphan drug program for coccidioidomycosis fungal infections. *Coccidioides immitis* is an endemic soil-dwelling fungus in the arid regions such as California’s Central Valley. Once contracted, victims endure symptoms that may take years of antifungal drug treatments to resolve. The goal of the Valley Fever Project is to develop drugs and vaccines to minimize the impact of this disease.

Dr. William Colston (LLNL), our third speaker, revealed some of the hi-technology that his group is using to develop a fully autonomous pathogen detection system (APDS) that is capable of continuously monitoring the environment for airborne biological threat agents (think anthrax). The system is designed to provide early warning to civilians in the event of a terrorist attack. He showed us a picture of one of the instruments being used at an U.S. airport, and to me it looked a lot like something use in “Get Smart,” the old TV spy-comedy series. William McCormick (Clorox) gave a stimulating anecdotal presentation that contrasted the responsiveness and style of different federal agencies when responding to emergency situations. His example included the regulation and use of bleach (surprise!!) in the neutralization of anthrax used bioterrorism threats through the postal service. In his experience, the CDC quickly recommended the use of bleach whereas another federal agency (un-named) is likely to be still holding committee meetings to figure out the correct bleach concentration that will kill microorganisms.

Our final speaker was Dr. Jon Mirsalis (SRI) whose energetic style and wit kept us awake until the end of the meeting. He spoke about the challenges involved in developing anti-infective therapeutics and discussed the NIH program to support preclinical toxicology and pharmacokinetics studies of drugs for treatment of AIDS, TB, malaria, biowarfare pathogens, and sexually transmitted diseases. In all, we had a full day of very interesting presentations. I know that I learned something new, and I hope that everyone else who attended did as well.