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Judy Day* (judyday@gmail.com), University of Tennessee - Dept of Mathematics, 227 Ayres Hall, 1403 Circle Drive, Knoxville, TN 37996-1320, and **Avner Friedman** and **Larry S Schlesinger**. *Modeling the Host Response to Respiratory Pathogens: Mycobacterium Tuberculosis and Bacillus Anthracis*.

To better understand the pathogenesis of respiratory pathogens such as *Mycobacterium Tuberculosis* or *Bacillus Anthracis*, we developed mathematical models of host interaction with these pathogens, using literature focused specifically on native lung cell types to guide our selection of interactions that we modeled. In so doing, we offer a different perspective from previous modeling efforts and offer insights into possible points of intervention and control of the particular infection. (Received July 31, 2011)