1116-VC-997   **Ellie Mainou*** (`emainou@smith.edu`), Box 7221, 1 Chapin Way, Northampton, MA 01063, **Chenyue Lu** (`lu23c@mtholyoke.edu`), Mount Holyoke College, 50 College Street, South Hadley, MA 01075, and **Olivia Justynski** (`justy22o@mtholyoke.edu`), South Hadley, MA 01075. *Tuberculosis(TB) Disease Modeling in the US.*

Tuberculosis (TB) is a disease of great global epidemiological importance. According to WHO, one third of the world's population has latent TB. Not only is TB prevalence high, but the future of TB management will also have to face the additional challenge of drug resistance. Strains resistant to the most common first-line drugs for TB treatment are already widespread. We constructed a compartmental mathematical model of TB in the US that encompasses four strains of differing resistance to treatment. This model also takes into account the effect of immigration, which contributes to the prevalence of latent TB in the US. We are currently fitting parameters to recent CDC data on TB morbidity and mortality. Our goal is to use this model to predict the future impact of drug-resistant TB on the US and the most effective means of TB control. (Received September 20, 2015)