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**Anne Elizabeth Yust\*** (aeyust@gmail.com), Birmingham-Southern College, 900 Arkadelphia Rd, Box 549032, Birmingham, AL 35254, and **Shlomo Ta'asan**. *A Data-Driven Approach to Modeling the Effect of Disease on the Immune System*. Preliminary report.

If we can determine the effect of a disease on the immune system, then we have the potential to develop interventions that could counter the ill-effects and return the system to a healthy state. Thus, the creation of models that can predict these effects on the immune system has become a current focus of scientists. Traditional models rely on underlying biological assumptions resulting from the current understanding of the interactions between a specific infectious disease and the immune system. Though often producing an effective model, this approach is limited to diseases that are widely understood. In my talk, I will introduce and discuss the advantages and disadvantages of a more general approach to modeling the effect of disease on the immune system. I will also include results produced by modeling specific diseases such as influenza A and lipopolysaccharide (LPS) with both traditional models and my general, agnostic model. (Received August 17, 2011)