1116-65-58          **Necibe Tuncer** and **Trang Le\*** (`trang-le@utulsa.edu`). *Structural Identifiability Issues of Epidemic Models.*

Structural identifiability in epidemic models is a crucial issue because unreliable estimates of parameters could result in inaccurate estimates of important epidemiological values such as the basic reproduction number. We performed structural identifiability analysis on various epidemic models using a differential algebra approach to investigate the characteristics of these models. It is necessary to note that a model which is structurally identifiable may not be practically so. Furthermore, we carried out practical identifiability analysis on these models using Monte Carlo simulations and sensitivity based analysis. (Received July 07, 2015)