1027-92-106 **Abdessamad Tridane*** (`tridane@math.asu.edu`), Department of Mathematics & Statistics, Arizona State University, Tempe, AZ 85287, **Horst Thieme** (`thieme@math.asu.edu`), Department of Mathematics & Statistics, Arizona State University, Tempe, AZ 85287, and **Yang Kuang** (`kuang@asu.edu`), Department of Mathematics & Statistics, Arizona State University, Tempe, AZ 85287. *A SEIRS model for influenza epidemic with antiviral agent treatment.*

We consider a SEIRS model that represents different compartments of population in which the influenza might spread, including the population of exposed individuals in contact with an infected individual but not infected and under treatment. Our aim is to explore the impact of treatment by antiviral agents with partially effective drugs on the transmission dynamics of the influenza. Our results show that in order to eradicate the disease, it may not be sufficient to reduce the basic reproduction number below one. In fact, we need to have high efficiency of the treatment. (Received February 20, 2007)