1048-92-306 **Abdul-Aziz Yakubu*** (`ayakubu@howard.edu`), Department of Mathematics, Washington, DC 20059, **Bassidy Dembele** (`dem_77@hotmail.com`), Department of Mathematics and Computer Scienc, Grambling, LA 71245, and **Avner Friedman** (`afriedman@mbi.ohio-state.edu`), Mathematical Bioscience Institute (MBI), Columbus, OH 43210. *Mathematical Model For Optimal Use of Sulfadoxine-Pyrimethamine As A Temporary Malaria Vaccine.*

In this talk, we will introduce a deterministic malaria model for determining the drug administration protocol that leads to the smallest first malaria episodes during the wet season in Mali. To explore the effects of administering the malaria drug on different days in the wet season while minimizing the potential harmful effects of drug overdose, we define 40 drug administration protocols. Our results fit the clinical studies of Coulibaly et al. at a site in Mali. In addition, we provide protocols that lead to smaller number of first malaria episodes during the wet season than the protocol of Coulibaly et al. (Received February 10, 2009)