1137-92-213 **Abba Gumel*** (agumel@asu.edu), School of Mathematical and Statistical Scienc, Tempe, AZ 85287, and **Steffen Eikenberry** and **Kamaldeen Okuneye**. *Mathematics of Climate Change and Malaria Dynamics.*

Climate change is known to significantly affect the dynamics of vector-borne diseases, such as malaria. In particular, the species involved in the transmission dynamics of malaria are affected by various abiotic conditions, such as temperature, precipitation, humidity and vapor pressure . A number of models, typically statistical (using data and statistical approaches to correlate some climate variables with malaria incidence) or mechanistic (accounting for the detailed dynamic nonlinear processes involved in disease transmission), have been employed to assess the likely impact of anthropogenic climate change on malaria transmission dynamics and control. These models have (generally) reached divergent conclusions, with some predicting a large expansion in the continental land area suitable for transmission and in the number of people at risk of malaria, while others predict only modest poleward (and altitudinal) shifts in the burden of disease, with little net effect , and the issue remains unresolved thus far. I will discuss some of our recent results on modeling the effect of some climate variables (e.g., temperature and precipitation) on the dynamics of malaria vector and the disease. This is a joint work with Steffen Eikenberry and Kamaldeen Okuneye. (Received February 04, 2018)