

1116-T1-2749      **Frank H Lynch\*** (lynch@ewu.edu), Department of Mathematics, 216 Kingston Hall, Cheney, WA 99004. *Mathematical modeling of competitive binding on a microarray.*

Competitive binding on a microarray can be used as a model of identification of single nucleotide protein (SNP) mutation in DNA. We model this binding with a nonlinear system of ordinary differential equations and show how a dimensionless formulation gives a small parameter. In order to identify parameters, results of the model are compared to real (gasp!) data. This application of differential equations is accessible for undergraduates who study planar systems of differential equations. (Received September 22, 2015)