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Azmy S Ackleh and **Jeremy J Thibodeaux*** (jthibodeaux@ucok.edu). *Parameter Estimation for a Mathematical Model of Erythropoiesis.*

We develop a convergence theory for identifying parameters in a mathematical model of erythropoiesis which consists of a quasilinear system of partial differential equations. We then apply the theory to obtain estimates of the maturation rate of precursor cells as a function of the erythropoietin concentration and the decay rate of the erythropoietin hormone as a function of the total number of precursor cells from computationally generated data. (Received September 18, 2007)