1019-34-22   **Mostafa Ghandehari*** (`ghandeha@cse.uta.edu`), Computer Science and Engineering, Box 19015, University of Texas at Arlington, Arlington, TX 76019, and **Jennifer Holyk**. *A Discrete Multi-compartmental pharmacokinetic model.* Preliminary report.

A system of linear difference equations is used to find the concentration of a drug for a multi-compartmental model. Diagonalization of a matrix of elimination rates gives the power of a matrix which leads to the solution of an initial value problem. Examples of specific drugs for two-compartmental model are discussed. (Received July 14, 2006)