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**Daniel B Forger\*** ([forger@umich.edu](mailto:forger@umich.edu)), 2075 East Hall, 525 East University, Ann Arbor, MI 48104. *Modeling Mammalian Circadian Rhythms.*

Biological circadian (24-hour) clocks time many biological processes that must occur at specific times of the day. Circadian behavior in mammals is co-ordinated by a group of 20,000 neurons in the suprachiasmatic nucleus (SCN). The molecular basis for these clock within each SCN neuron is a complex network of genetic feedback loops. I will use mathematical modeling to determine why 24-hour oscillations appear in this network and what parts of the network determine the period. I will also present models of the SCN to determine how timkeeping is co-ordinated throughout the body. (Received February 05, 2008)