



CDB SEMINAR

Daniel B. Forger III

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Tuesday, December 18, 2007

16:00~17:00 C1F CDB Auditorium

Modeling Mammalian Circadian Rhythms

Summary

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 timekeeping is co-ordinated throughout the body.

Host:

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