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Circadian gene expression in cultured cells.

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Abstract

In mammals, **circadian** oscillators not only exist in specialized neurons of the suprachiasmatic nucleus, but in almost all peripheral **cell** types. These oscillators are operative even in established fibroblast **cell** lines, such as Rat-1 **cells** or NIH3T3 **cells**, and in primary fibroblasts from mouse embryos or adult animals. This can be demonstrated by treating such **cells** for a short time period with high concentrations of serum or chemicals that activate a large number of known signaling pathways. The possibility of studying **circadian** rhythms in **cultured cells** should facilitate the biochemical and genetic dissection of the **circadian** clockwork and should promote the discovery of new clock components.

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