

P847: Readings on Genetic Oscillators (To be discussed in class Oct 23)

Read the two papers on oscillators:

1) Elowitz, Michael B., and Stanislas Leibler. "A synthetic oscillatory network of transcriptional regulators." *Nature* 403, no. 6767 (2000): 335-338.

2) Rust, Michael J., Joseph S. Markson, William S. Lane, Daniel S. Fisher, and Erin K. O'Shea. "Ordered phosphorylation governs oscillation of a three-protein circadian clock." *Science* 318, no. 5851 (2007): 809-812.

Paper 1 is a landmark paper in synthetic biology (cited ~ 3000 times). The 2nd paper provided some key insights into unravelling a cool protein only oscillator that governs circadian rhythms.

Come prepared to discuss each figure. Are the results sound? what are the conclusions? what questions remain unanswered?