

P847: Readings on patterning (To be discussed in class Nov 6)

Read the two papers on noise:

1) Hu, Z., & Lutkenhaus, J. (1999). Topological regulation of cell division in *Escherichia coli* involves rapid pole to pole oscillation of the division inhibitor MinC under the control of MinD and MinE. *Molecular microbiology*, 34(1), 82-90.

2) Schweizer, J., Loose, M., Bonny, M., Kruse, K., Mönch, I., & Schwille, P. (2012). Geometry sensing by self-organized protein patterns. *Proceedings of the National Academy of Sciences*, 109(38), 15283-15288.

Paper 1 is one of two papers that came out nearly back-to-back on the observation of pole-to-pole oscillations of proteins in tiny bacterial cells. How does this happen? Many theories emerged. The 2nd paper represents many years of effort to understand the biophysical mechanisms.

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