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Transcriptional Interference: A quantitative approach to in vivo dynamics of RNAP on DNA. KIM SNEPPEN, Niels Bohr Institute — We present a mathematical model for transcriptional interference by RNA polymerase traffic in Escherichia coli. The model deals with the interference between the two promoters pA and pS. The RNAPs are injected onto the DNA through binding and formation of sitting duck complexes at the respective promoters, followed by subsequent formation of elongating complexes. Finally we discuss a combination of modeling and in vivo-experiments can be used to infer the interference-recruitment game that govern the core of the genetic switch in the temperate bacteriophages 186.

K. Sneppen, I.B. Dodd, K.E. Shearwin, A.C. Palmer, R.A. Schubert, B.P. Callen, and J.B. Egan. J. Mol. Biol. 346:399 (2005)

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