

# Transcriptional control: from chromatin structure to phase condensates

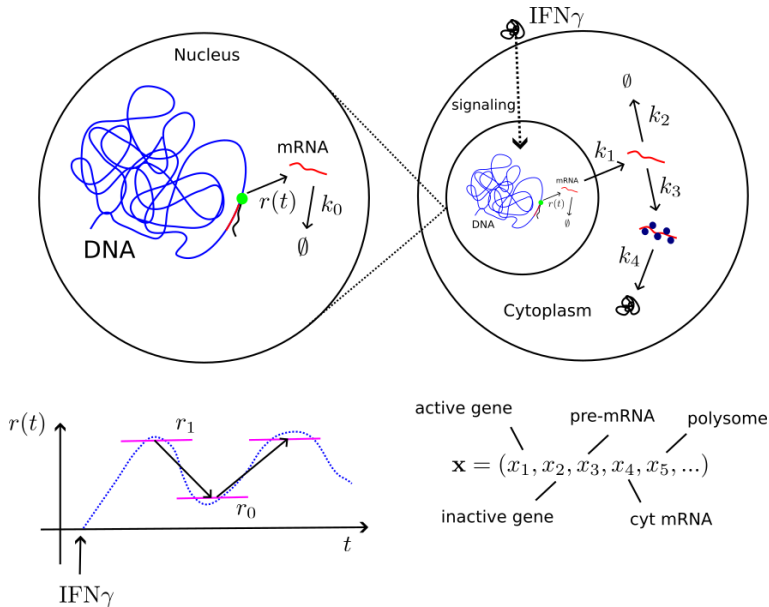
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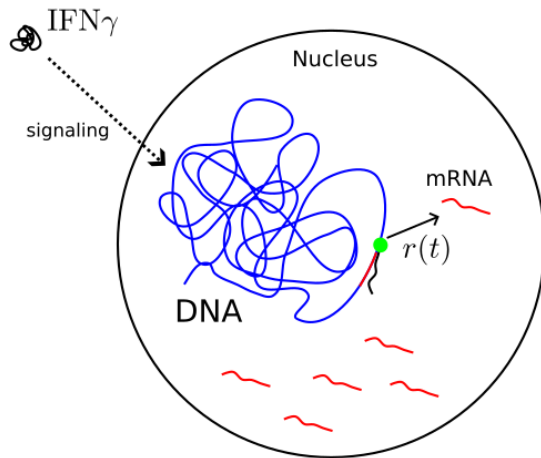
# Summary

- ▶ Quick recap
- ▶ Going deeper into transcriptional control

# The biological question



# Sources of variability in the rate of gene expression



$r(t)$  is determined by many factors:

- \* 3D Chromatin structure e.g., looping, TADS, ...
- \* Epigenetic modifications (methylation, acetylation)
- \* Chromatin Dynamics (subdiffusion, viscoelasticity)
- \* Formation of transcriptional condensates
- \* Thermodynamic fluctuations - stochasticity
- ...



not necessarily independent

# Chromatin Dynamics

Discuss the Nozaki paper briefly

# Chromatin Dynamics

Include results from tracking experiments