

IGM RNA Biofunction Seminar

Enhancer control of transcriptional bursting

深谷 雄志 博士

Lewis-Sigler Institute for Integrative Genomics,
Princeton University, USA

Transcription is episodic, consisting of a series of discontinuous bursts. Using live-imaging methods and quantitative analysis, we examine transcriptional bursting in living *Drosophila* embryos. Different developmental enhancers positioned downstream of synthetic reporter genes produce transcriptional bursts with similar amplitudes and duration but generate very different bursting frequencies, with strong enhancers producing more bursts than weak enhancers. Insertion of an insulator reduces the number of bursts and the corresponding level of gene expression, suggesting that enhancer regulation of bursting frequency is a key parameter of gene control in development. We also show that linked reporter genes exhibit coordinated bursting profiles when regulated by a shared enhancer, challenging conventional models of enhancer-promoter looping.

2016年8月4日(木)

10:30~11:30

医学部中棟3F 3-1共通セミナー室

連絡先: 遺伝子病制御研究所 RNA生体機能分野 廣瀬 哲郎 内線6956