GENETICS

VIVAT REX

6.01.2007

Ever since I heard 1976 about the Lyon hypothesis (described already in 1961 by Mary Frances Lyon) of X inactivation I wondered how this works on a molecular level – locking this chromosome in a separate nuclear compartment, condense it or encase it? Silencing a whole chromosome probably needs a concerted action of higher order DNA structure, histone code modification and primary sequence features. The last seems to be indeed relevant as C. elegans X has a target for gene expression repression by the dosage compensation complex – small rex motifs (X recruitment elements) ?CAGGGG and ?GTAATTG. The strength of DCC recruitment is correlated with rex motif number BUT rex motifs are not enriched on X – so certainly more features need to synergize for X repression. Yea, yea.