



Figure 20. A transcription factor (TF) model to distinguish euchromatin and heterochromatin. This model proposes that the distinction of euchromatin and heterochromatin is based on a synergistic versus a more random organization of TF binding sites. Although euchromatic gene transcription and the generation of an mRNA is dependent on cooperative binding of TFs at fully functional promoters, repeat-rich heterochromatic regions display a more uncoordinated and reiterated arrangement of TF binding sites. This results in the occurrence of aberrant or mis-processed ncRNAs and the recruitment of repressive KMT complexes. (Adapted from Bulut-Karslioglu et al. 2012.)