



Figure 5. DCC recruitment and spreading on the X chromosome. (A) The DCC is recruited to approximately 100 to 300 recruitment elements and spreads along both X chromosomes. It also binds to the upstream region of the autosomal gene *her-1* and reduces expression by 20-fold, denoted DCC^H to indicate that the complex that binds to *her-1* lacks the DPY-21 protein. (Adapted from Alekseyenko and Kuroda 2004.) (B) From initial recruitment sites, the DCC spreads and accumulates preferentially at promoters by an unknown mechanism. The recruitment sites on the X chromosome, indicated by asterisks, contain multiple 12-bp DNA sequence motifs (shown below the DNA) that are important for recruitment. DCC binding is dynamic during development and is tuned to the transcriptional activity of individual genes. DCC accumulation is high in the body of highly expressed genes. (Adapted from Ercan and Lieb 2009.)