



Figure 4. DNA versus chromatin. (A) The genome: Invariant DNA sequence (green double helix) of an individual. The epigenome: The overall chromatin composition, which indexes the entire genome in any given cell. It varies according to cell type and response to internal and external signals it receives. (B) Epigenome diversification occurs during development in multicellular organisms as differentiation proceeds from a single stem cell (the fertilized embryo) to more committed cells. Reversal of differentiation or change of cell type identities (blue dashed lines) requires the reprogramming of the epigenome of the individual cells.