



Figure 5. Early epigenetic events during germ cell specification. Expression of Blimp1, Prdm14, and Tcfap2c in descendants of epiblast cells leads to repression of the somatic gene expression program and initiation of the germ cell program (red). This is followed by expression of Stella, Nanog, and Esg1, increase in the H3K4me3 and H3K9ac active marks, as well as the repressive H3K27me3 mark (*), and loss of H3K9me2 and 5mC. The PGCs start to show loss of DNA methylation as they migrate to the developing gonads, with comprehensive loss of DNA methylation and the erasure of imprints occurring shortly after they enter the gonads. PRDM9 is crucial in the later process of gametogenesis, marking the transition from PGCs to gametes. This occurs with the onset of meiosis at E13.5 in females. **In males gametogenesis occurs postnatally.