13S Condensin Complex **Worm Condensin Complex** Worm DC Complex MIX-1 SMC-4 MIX-1 **DPY-27** XCAP-E XCAP-C SDC-1 SDC-3 SDC-2 XCAP-D2 **DPY-28 DPY-30** DPY-21 XCAP-G reduces X-linked resolves and condenses resolves and condenses mitotic

and meiotic chromosomes

gene expression

Figure 3. The Dosage Compensation Complex (DCC) and Condensin Complex

The worm DCC resembles the condensin complex, which functions in condensing chromosomes as they go through nuclear division. In particular, the DCC contains several subunits that resemble the XCAP (XCAP for *Xenopus* chromosome-associated polypeptide) subunits of the 13S condensin complex originally characterized in *Xenopus*. The native worm condensin complex shows overall similarity to the homologous functional 13S complex in *Xenopus*. The SDC proteins and DPY-30 do not resemble known condensin subunits; they instead function in localizing the DCC complex to the X chromosome. (Adapted from Meyer 2005.)

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mitotic chromosomes