Mechanisms of X Chromosome Dosage Compensation

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Abstract:
In many animals, males have one X and females have two X chromosomes. The difference in X chromosome dosage between the two sexes is compensated by mechanisms that regulate X chromosome transcription. Recent advances in genomic techniques have provided new insights into the molecular mechanisms of X chromosome dosage compensation. In this review, I summarize our current understanding of dosage imbalance in general, and then review the molecular mechanisms of X chromosome dosage compensation with an emphasis on the parallels and differences between the three well-studied model systems, *M. musculus*, *D. melanogaster* and *C. elegans.*

Key Word:
X chromosomes, mechanisms

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