

Diapause in *Drosophila melanogaster*

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The fruit fly *Drosophila melanogaster* can enter reproductive diapause as a response to low temperatures and short day length. We have investigated genome wide transcriptional changes in diapausing *D.melanogaster* females. Many of the genes affected by diapause had previously been found to alter their expression in response to food deprivation and cold exposure as well as they were identified to be part of latitude adaptations in *D.melanogaster* populations. We also identify a significant overlap in transcriptional changes with other diapausing *Drosophila* species from temperate regions. Taken together our data provide the first comprehensive analysis of transcriptional changes induced by diapause, and provide a framework for future investigations of dormancy in other organisms.