

P045 The role of pacman protein in adult *Drosophila* male fertility.
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Pacman protein (PCM) is an exoribonuclease that functions within the 5'→3' mRNA degradation pathway of *Drosophila*. PCM has functional homology to XRN1, the main exoribonuclease in the yeast 5'→3' mRNA degradation pathway.

Previously a number of mutations in *pacman* were constructed and used to investigate the role of PCM in *Drosophila*, particularly male fertility. Our analysis shows that in adult flies, *pacman* mutants have significantly smaller testes, both in terms of length and width, compared to control flies. It also was observed that the testes of *pacman* mutant fly strains are abnormal, showing a narrow region some distance from the tip of the testis. At 25°C, the presence of the mutation in the *pacman* gene resulted in a significantly reduced number of offspring. In addition, at every age of fly the *pacman* mutant flies show lower male fertility than control flies, and a higher rate of decline in fertility.

We are currently analysing the spatial and temporal localisation of PCM in testes using confocal microscopy. We are particularly interested in the localisation of PCM in relation to other proteins in the 5'→3' mRNA degradation pathway. The effect of *pacman* on relevant signalling pathways is also being investigated.