## Synthetic 'upgrade' for fruit fly's DNA

The genetic code of the fruit fly *Drosophila* has been hacked into, allowing it to make proteins with properties that don't exist in the natural world. The advance could ultimately lead to the creation of new or "improved" life forms in the burgeoning field of synthetic biology.

The four letters of the genetic code, A, C, T and G, are read in triplets, called codons, by the cell's proteinmaking machinery. Each codon gives an instruction for the type of amino acid that gets added next in a protein chain, or tells the machinery to stop.

Jason Chin at the Medical Research Council Laboratory of Molecular Biology in Cambridge, UK, and colleagues previously showed that it was possible to reassign one of these stop codons to incorporate an "unnatural" amino acid instead, and last year they engineered nematode worms to manufacture such proteins.

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