

Study: Stem cells found in fruit fly gut

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Baltimore scientists say they have identified stem cells in the mid gut of *Drosophila* fruit flies.

Allan Spradling and Benjamin Ohlstein of the Carnegie Institution of Washington in Baltimore used lineage labeling to demonstrate the existence of such cells in the insect's digestive system.

Writing in a paper published online by the journal *Nature* this week, they said unlike other stem cells, those from the fly intestine do not attach to a partner stromal cell.

Vertebrate and invertebrate digestive systems show extensive developmental similarities.

The researchers suggest studying the stem cells in the gut system of fruit flies might help provide clues about what goes wrong in humans who suffer from some common digestive diseases and cancer.

In a second paper, Craig Micchelli and Norbert Perrimon of the Harvard Medical School also identify stem cells in the mid gut of *Drosophila* and agree with Spradling and Ohlstein the cells are regulated by Notch signaling.

The teams believe the ability to identify, manipulate and genetically trace cell lineages in the mid gut should lead to the discovery of additional genes that regulate stem and progenitor cell biology in the gastrointestinal tract.

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