

Zebrafish mutation studied

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Harvard Medical School scientists say they've found a small molecule that suppresses the phenotype of a zebrafish mutation.

Zebrafish are a popular model organism because they can be readily manipulated genetically and grow very quickly, allowing rapid in vivo analysis of mutation phenotypes.

Genes involved in the cell-cycle are very similar in zebrafish and humans, making zebrafish ideal for studying genes affecting cell division, a process often compromised in cancer.

Leonard Zon, a professor of pediatrics, and colleagues have identified a chemical suppressor of a specific cell-cycle mutation.

The team, through a large-scale chemical screen, identified a compound, persynthamide, which suppresses the *crb* phenotype.

The small molecule was shown to delay progression through S phase of the cell cycle, the time when DNA is replicated before cell division. However, the precise molecular target of the small molecule remains to be identified.

The researchers said the use of zebrafish to identify a cell-cycle regulator raises the possibility of using transgenic zebrafish to screen directly for chemical suppressors of cancers that arise from cell-cycle defects.

The study appears in the December issue of Nature Chemical Biology.

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