Blocking one oncogene makes leukemic stem cells revert in laboratory study.

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Recently, researchers have discovered beta-catenin as a new target for Mixed Lineage Leukemia (MLL) treatment. This form of leukemia is caused by mutations in the MLL gene and causes approximately 70% of infant leukaemias and 10% of adult acute leukemias. With currently available therapies, only 50% of children with this leukemia survive for longer than two years. Studies at King's College London revealed the role of one oncogene, beta-catenin, in promoting the development of leukemic stem cells. When beta-catenin was suppressed, there was reduced leukemic stem cell growth, delayed onset of leukemia, and even reversion of stem cells to a pre-leukemic state. The studies showed that suppressing beta-catenin in human MLL leukemic stem cells made drug resistant cells sensitive to treatment. Normal blood cells do not require beta-catenin so it could be an excellent target for selectively attacking cancer cells.

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