Scientists Gain Insights Into Cancer's Spread

[1]

Submitted on 27 September 2006 - 11:59am

This article is reproduced by CienciaPR with permission from the original source.

Calificación:

Yahoo News [2] WEDNESDAY, Sept. 20 (HealthDay News) -- Aggressive cancer cells have a "toggle switch" that enables them to travel to other parts of the body and form new tumors, say Duke University researchers. Until now, scientists have believed that gene mutations must occur in cancer cells so that they transform permanently from stationary epithelial cells to migratory mesenchymal cells. These mutations would allow them to metastasize, or travel to other parts of the body. But in a new study published in this week's issue of the Proceedings of the National Academy of Sciences, researchers found the most aggressive cancer cells are equal parts epithelial and mesenchymal, transitioning between the two states as their surroundings demand. "Understanding this toggle switch might ultimately enable scientists to find ways to stop cells from metastasizing, which is the most deadly trait of cancer," lead investigator Mariano Garcia-Blanco, a professor of molecular genetics and microbiology, said in a prepared statement. The researchers observed cancer cells in rats that had been implanted with a fluorescent "reporter" -- a protein that illuminates if the cell turns epithelial but lies dormant if the cell reverts to its mesenchymal state. "Our findings validate that tumors are highly complex in their behavior and don't necessarily need a gene mutation to alter their behavior," Sebastian Oltean, a research associate, said in a prepared statement. This new understanding may eventually lead to new therapies for blocking cancer metastasis.

Links
[1] https://www.cienciapr.org/en/external-news/scientists-gain-insights-cancers-spread?language=es [2] http://news.yahoo.com/s/hsn/20060921/hl_hsn/scientistsgaininsightsintocancersspread