Random gene breakage found in cancer study

March 8 2006

Scientists at the University of Navarra in Spain say they've performed a bioinformatic study on genes implicated in the development of cancer. The researchers -- Javier Novo and José Luis Vizmanos -- say the study led to the identification of certain common properties in those genes.

"The objective consisted in discovering whether those genes which suffer translocations (breakages) in this disease have any structural or functional characteristics in common," said Novo.

The research, for the first time, provided clear data supporting the hypothesis that the most important mechanisms in the development of tumors are those which generate random breakage.

"When a normal cell becomes tumorous, one of the most important changes that it experiences is that its genome becomes unstable, and breaks in various places," explained Novo.

Until now, there have been many examples of this kind of breakage published, "but it was not well known what caused them nor how they were produced," he said. "For example, if they were produced at random, or if there was something in the sequence which aided in their appearance in concrete locations."

The research project is described in an article to be published in the journal Trends in Genetics.