

New technique developed to control cervical cancer

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Gene related to the proliferation of cancerous cells blocked through molecular technology.

A group of researchers from Mexico's General Hospital, Health Secretariat, Medicine Faculty and the Institute of Cellular Physiology of the National Autonomous University of Mexico (UNAM) identified a

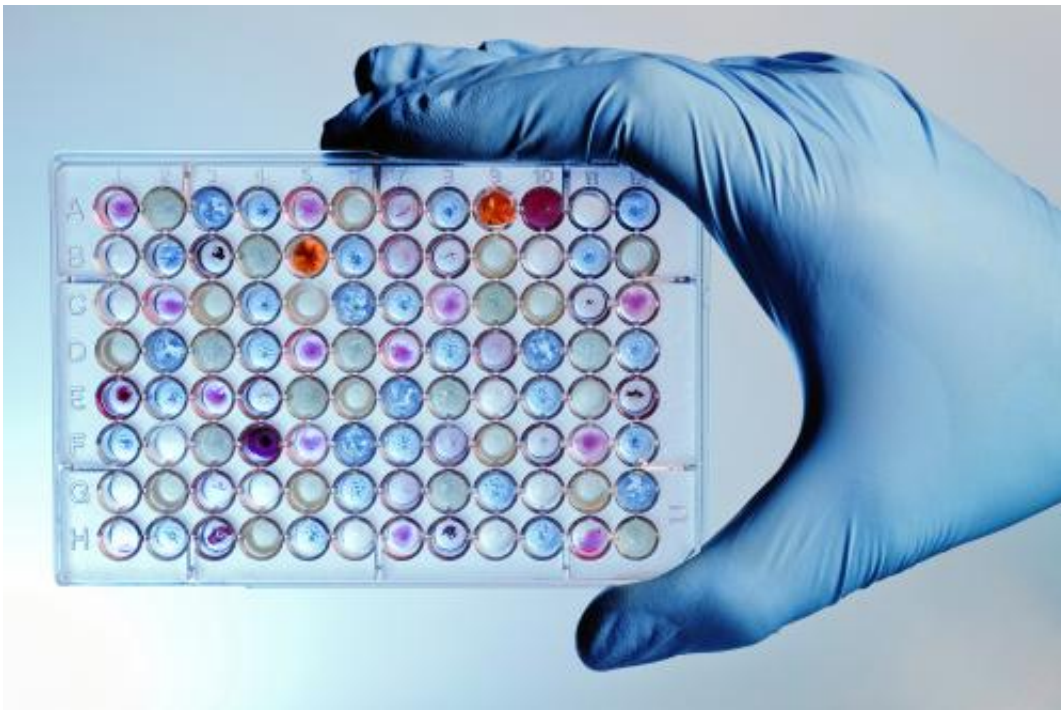
therapeutic target for cervix cancer: gene CDKN3.

The researched performed at the lab indicates that when this gene is blocked in culture [cancerous cells](#), the neoplastic proliferation greatly diminishes.

Jaime Berumen Campos, who coordinates the research said that this gene is blocked by a "siRNA" (small interference RNA), molecular technique applied to several strands of cervix cancer cells making them incapable of proliferating, and confirmed that tumors in mice stopped growing.

To achieve this, researchers first analyzed eight thousand and 638 genes in 43 samples of cervix cancer cells, identifies six suspect of making [cervical cancer](#) grow.

One of these [genes](#) is CDKN3, which apparently is the most important, given that its activity was highly elevated in most of explored cancers.



Later, clinical evolution of 42 patients was studied during five years, and was found that when CDKN3 is very active, patients have little survival, Berumen Campos explained, who because of this research won the Award of Medical Research "Dr. Jorge Rosenkranz" 2013, in the clinical area.

"70 per cent of the patients with a high activity of this gene, died less than two years of developing the illness, meanwhile only 15 per cent of patients with a low activity of this indicator died while the study was being performed".

Experimentation in culture cells and observation in women with cancer, indicate that this gene is linked to the aggressiveness and malignant growth of the tumor. Besides, the findings indicate that this gene could be a good [therapeutic target](#), meaning, that overriding its primary function (promoting cellular growth), it would be possible to diminish the proliferation of tumors in women.

Cervical cancer is treated by surgery, chemo and radiotherapy or a combination of all the above, according to the clinical stage. The success and survival diminish as the disease advances.

The percentage of women who survive five years is reduced by 93 percent in the first stage, and to 15 percent in the fourth stage. Contrary to other types of cancer, for which drugs against specific molecular targets exist, this have not been developed for cervical cancer.

Finally, Berumen Campos said that this found methodology still requires clinical trial and validation, but preliminary results look promising and will become an important tools for oncologist to identify women with cervical cancer that have a high risk of dying in less than two years and, therefore, require a more intense medical treatment.

Provided by Investigación y Desarrollo

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