

Light can trick the immune system to attack cancer

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Accordingly, researchers at the University of Rochester Medical Center in the US describe their method as "*spying on spy light to track cancer cells*."

"*Immunotherapy is different from radiotherapy. Instead of directly destroying cancer cells, immunotherapy shows that the immune system works in certain ways by stimulating tonsil cells.* Minsoo Kim, a professor at the University of Rochester, said that he was a *cancer* patient. However, the problem is that immunotherapy can make the immune system overreact or react poorly.



So Kim's lab recently conducted a study to monitor sensitive light molecules that can effectively coordinate active T-cells that are effective against tumors in an effective manner. more thorough.

They discovered that a molecule is called **channelrhodopsin** (CatCh), which works in algae and it is very sensitive to light, can be put into the immune system through a virus and activated to control reaction. T cell response to cancer tumors.

They also tested an LED chip on mice that eventually hoped that the method could be implanted into humans.

The team evaluated this method on a mouse with melanoma in the ear.

Redeemers wearing a tiny battery pack send wireless signals to the LED chip - allowing researchers to remotely light up the tumor and surrounding areas, taking that light to coordinate enhanced T cells kill cancer cells on mice.

Optical control is sufficient to allow the immune system to nearly wipe out malignant tumors without any harmful side effects.

Talking about future studies, Mr. Kim said he will determine whether the wireless LED signal can emit light to the tumor in the body and can activate it to attack T cells. .

Kim said that this discovery is important if combined with immunotherapy will make the cancer treatment process safer, more effective and able to control follow-up.

With improvements, modern optical methods can also allow doctors to see, monitor cancer in real time, if this treatment achieves its certain goals.

Currently, when patients receive immunotherapy they have to wait several weeks and then undergo photographic studies to find out whether this immunotherapy is effective.

This research has just been published in Nature Communications.

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