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Hope for HIV patients

Scientists claim breakthrough in cure for chronic viral infections

BEIJING: There's now hope at the end of the tunnel for patients with chronic viral infections such as HIV and Hepatitis B.

According to an article published online by *Nature* magazine, Chinese scientists have identified a unique subset of virus-specific CD8+ T cells playing a pivotal role in the control of viral replication during chronic infection.

Ye Lili, a professor from the Third Military Medical University in Chongqing and a co-author of the article, said that the CD8+ T cells kill infected cells and secrete anti-viral

cytokines to effectively clear the virus in the acute infection.

During the chronic viral infection, the CD8+T cells become exhausted, exhibiting poor effector function and lose memory ability, Ye said, who is working under a national programme launched in 2013. "The number of CD8+T cells does not drop, but it seems like police stop fighting with criminals."

However, though the exhausted cells seem to lose the function of getting rid of the virus, scientists found that they still contain viral replication in chronic infections to

keep the amount of virus at a low level.

Scientists discovered that a subset of exhausted CD8+T cells expressing the chemokine receptor CXCR5 plays a critical role in the control of viral replication in mice that were chronically infected with lymphocytic choriomeningitis virus.

Scientists called the subset as CXCR5+ CD8+ T cells that were preferentially localised in B-cell follicles, expressed lower levels of inhibitory receptors and exhibited more potent cytotoxicity.

Scientists identified the Id2/E2A axis as an important regulator for the generation of the CXCR5+ subset.

Currently, chemical drugs can only restrain the viral replication to some extent, but not clear the virus in treating patients of HIV, Hepatitis B and cancers.

Ye said the new findings would allow researchers to find certain measures to improve and stabilise the function of CXCR5+ CD8+ T cells to clear the virus, offering possibility of curing these diseases. — China Daily/Asia News Network