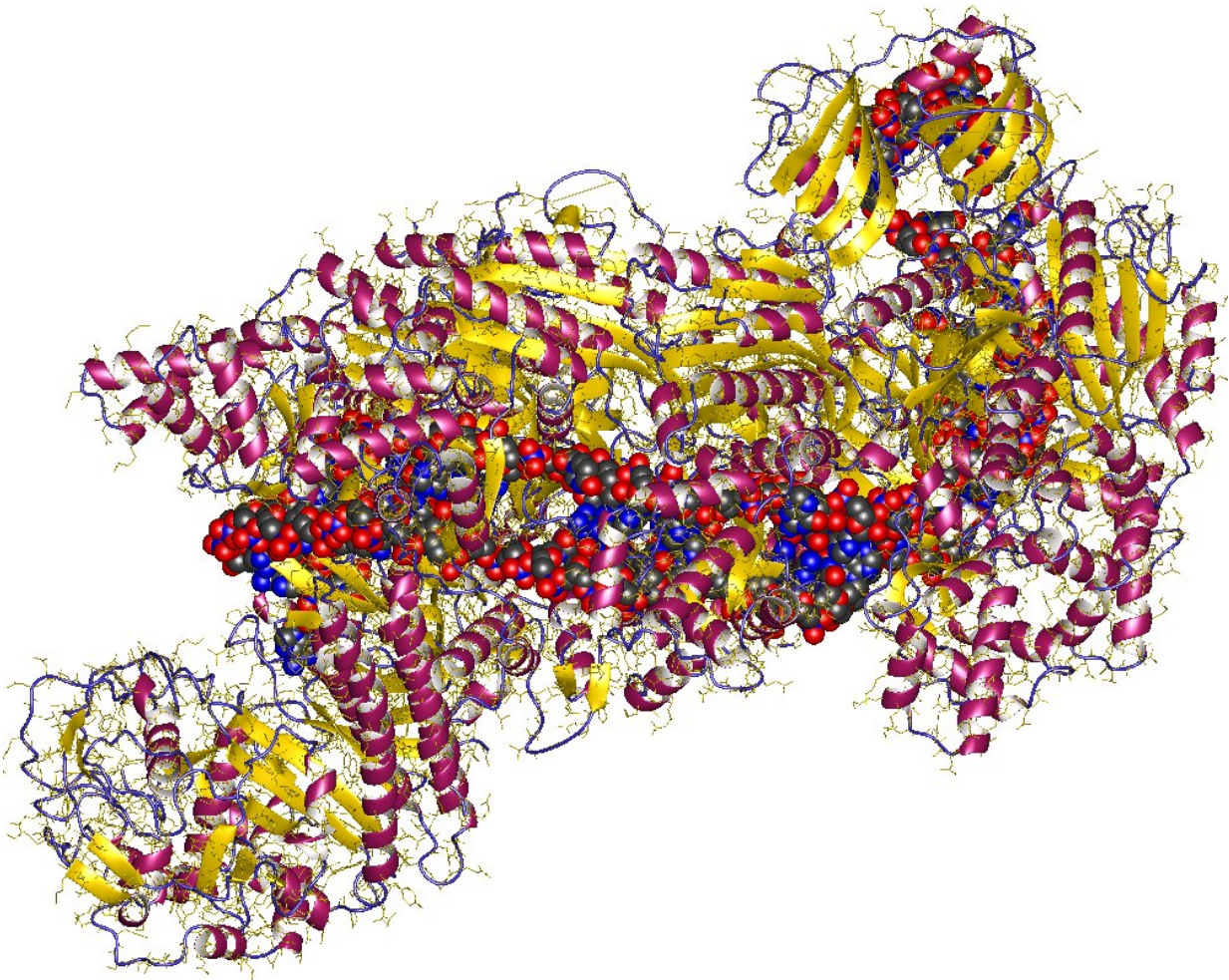


# Chinese team to pioneer first human CRISPR trial

July 22 2016, by Bob Yirka

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CRISPR (= Clustered Regularly Interspaced Short Palindromic Repeats) + DNA fragment, E.Coli. Credit: Mulepati, S., Bailey, S.; Astrojan/Wikipedia/ CC BY 3.0

(Medical Xpress)—A team of researchers at Sichuan University's West China Hospital has announced plans to begin a clinical trial where cells modified using the CRISPR gene editing technique will be used on human beings for the very first time. They plan to edit genes in such a way as to turn off a gene that encodes for a protein that has been shown by prior research to slow an immune response and by so doing treat patients with lung cancer.

The CRISPR [gene editing technique](#) has been in the news a lot of late as scientists creep ever closer to using it as a means to treat diseases or to change the very nature of biological beings. China has been a leader in promoting such research on human beings—they were the first to use the technique to on human embryos.

This new effort is seen as far less controversial—a team in the U.S. is planning a similar study as soon as they can get regulators to greenlight their project. The Chinese team plans to retrieve T cells from patients that have incurable [lung cancer](#) and then edit the genes in those cells. More specifically, they will be looking to disable a gene that encodes for a protein called PD-1—prior research has shown that it acts as a brake on an [immune response](#) to help prevent attacks on healthy cells. Once the cells have been edited and inspected very carefully to make sure there were no editing errors they will be allowed to multiply and then all of the cells will be injected back into the same patient's bloodstream. It is hoped that the edited cells will cause the immune system to mount a more aggressive attack on [tumor cells](#), killing them and curing the patient.

The researchers acknowledge that they do not know for sure how the body will respond, whether it will cause a more aggressive attack on the tumor cells or kick off other problems related to an overzealous immune response.

The clinical trial is set to start next month, 30 candidates have been chosen, but only one will get the edited [cells](#) initially—a three dose regimen. That patient will be monitored very closely for both positive and negative responses—the overall goal is to see if the procedure is safe, but the researchers are hoping, of course, to see some sign of tumor reduction.

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