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Swiss scientists create artificial viruses to combat cancer cells

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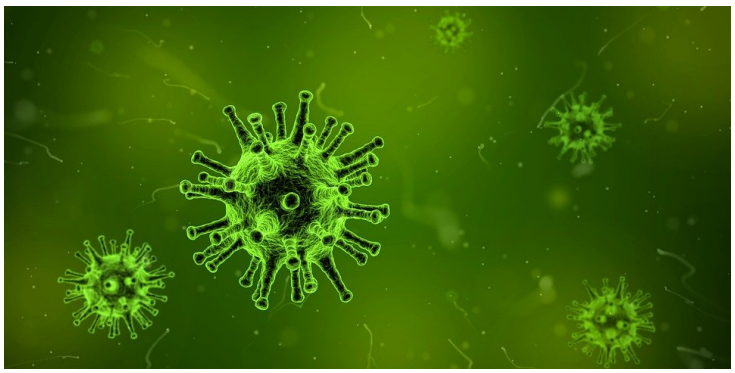

Swiss scientists from the University of Geneva (UNIGE), Switzerland, and the University of Basel have created artificial viruses that can be used to target cancer. These designer viruses alert the immune system and cause it to send killer cells to help fight the tumor.

Stimulating the immune system to specifically and wholeheartedly combat cancer cells, however, has remained a distant goal. Researchers have now succeeded in manufacturing innovative designer viruses that could do exactly that.

The researchers built artificial viruses based on lymphocytic choriomeningitis virus (LCMV), which can infect both rodents and humans. Although they were not harmful for mice, they did release the alarm signals typical of viral infections. The virologists also integrated certain proteins into the virus that are otherwise found only in cancer cells. Infection with the designer virus enabled the immune system to recognize these cancer proteins as dangerous.

This very promising designer virus has already been patented through Unitec, a structure that offers advice as well as industrial and financial contacts to UNIGE, the University Hospital and the University of Applied Sciences and Arts of Geneva researchers.