

CRISPR technology successfully targets HPV

Researchers have hijacked a defense system normally used by bacteria to fend off viral infections and redirected it against the human papillomavirus (HPV), the virus that causes cervical, head and neck, and other cancers.

Using the genome editing tool known as CRISPR, the Duke University researchers were able to selectively destroy two viral genes responsible for the growth and survival of cervical carcinoma cells, causing the cancer cells to self-destruct.

“Because this approach is only going after viral genes, there should be no off-target effects on normal cells,” said Bryan R. Cullen, Ph.D., senior study author and professor of molecular genetics and microbiology at Duke University School of Medicine. “You can think of this as targeting a missile that will destroy a certain target. You put in a code that tells the missile exactly what to hit, and it will only hit that, and it won’t hit anything else because it doesn’t have the code for another target.”

The CRISPR targeted system was only discovered a decade ago. Looking at the genomes of different types of bacteria, researchers had noticed long stretches where the same genetic sequence was repeated. In between these repeats lay DNA sequences that differed from bacteria to bacteria. Scientists figured out that these unique sequences—known as clustered regularly interspaced short palindromic repeats or CRISPR—were derived from viruses that had previously infected the bacteria.

Read the full, original story: [Editing HPV’s genes to kill cervical cancer cells](#)