

Korean firm develops new CRISPR/Cas technology specific for bacteriophage

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iNtRON developed New CRISPR/Cas technology specific for Bacteriophage as PHAGERUS Platform



iNtRON Biotechnology has developed its unique CRISPR/Cas system customized for the genetic modification of certain bacteria and corresponding bacteriophage.

The technology enables the company to freely edit various genes in the bacteriophage gene to have new and wanted functions.

iNtRON's PHAGERUS platform technology is being developed on the hypothesis that bacteriophage plays an instrumental role to maintain immune system in human beyond the common concept of 'bacteria killing virus'. In other words, massive number of bacteriophages have existed longer than humans, and some have controlled certain harmful viruses and involved in affecting the human immune system.

Dr SON, Jee Soo, the head of Bio Drug Business said, "Virus targeting PHAGERUS platform was developed based on 'ViP cycle hypothesis (relationship between bacteria-virus-phage)' to screen natural bacteriophage candidates for vaccine and secure antigen-peptide (Ag-peptide; mimotope) candidates utilizing its own modified phage-display technology."

In this regard, the company plans to continuously develop antiviral cocktail agents composed of natural bacteriophages collected in nature, and aims to utilize the mimotope discovered in-house as genetic engineering technology rather than the common use to express on a mockup bacteriophage which is a backbone vehicle so the mimotope could be applied to engineered bacteriophage agents eventually.