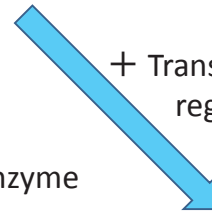
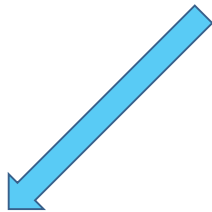
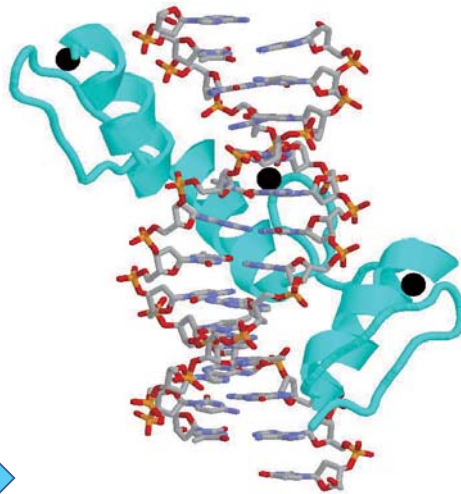


Application of artificial nucleic acid binding proteins to medical treatment and agriculture

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Artificial nucleic acid binding protein



+ Nucleic acid
cleaving enzyme

+ Transcriptional
regulatory domain

“Viral replication inhibitor”

“Artificial nucleic acid cleaving enzyme”

“Artificial transcription factor”

Action Principle :

Prevention of virus infection by inhibiting viral replication

Artificially give immunity against virus to the plant

Action Principle :

Inactivation of virus by cleavage of genomic nucleic acid of target virus

Action Principle : The expression level of target gene can be freely regulated by selection of transcriptional regulatory domain

Wild Type Engineered Plant

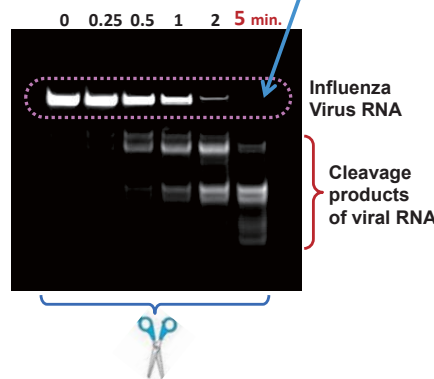


Wildtype is dead!

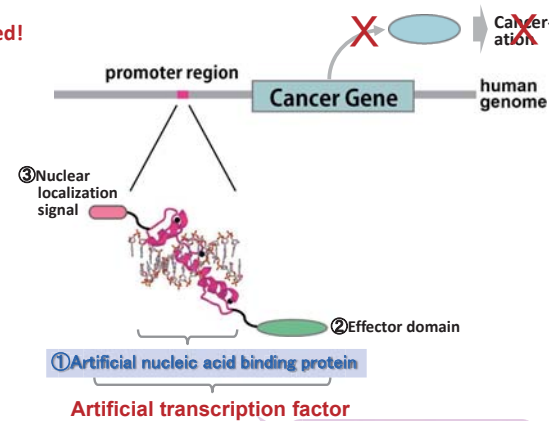
Virus inoculation

Engineered plants are completely healthy!

Completely disappeared!



Influenza
Virus RNA
Cleavage
products
of viral RNA



Artificial transcription factor

Enable regulation of expression of only targeted genes

Healthcare / Animal husbandry : Anti viral drug
Agriculture : Virus resistant crops

Healthcare : Protein-based drug
Agriculture : Production increase