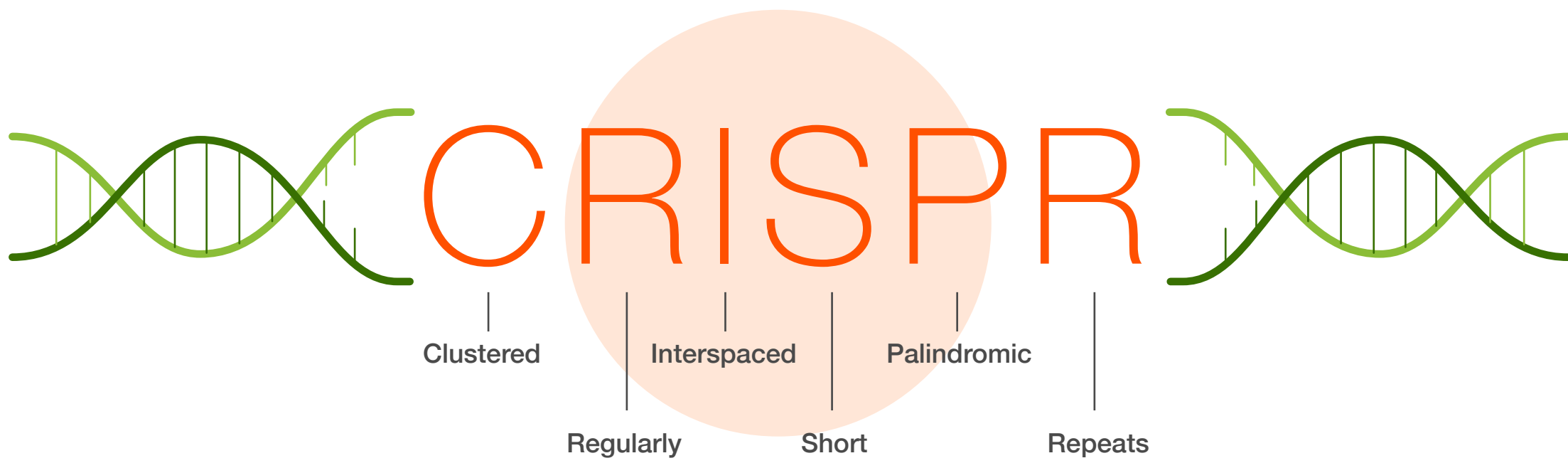


What is CRISPR?

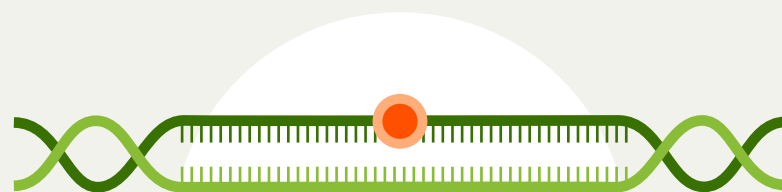
These are repetitive DNA fragments that bacteria use to defend themselves against invading viruses



How does it work?

01.

A "guide RNA" is constructed, which matches the piece of DNA to be modified.



Cas9

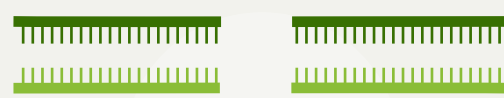


02.

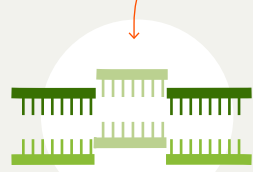
RNA binds to Cas proteins and directs the work of these **molecular scissors**.

03.

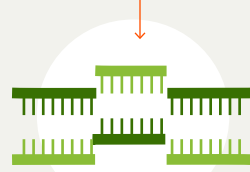
CAS scissors, guided by the RNA, search for the specific sequence and cut it.



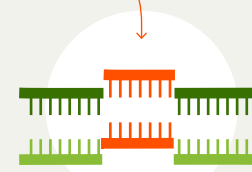
We can then...



Silence the gene of interest



Edit the gene by grafting in new DNA



Repair the gene with a modified DNA fragment

Main applications

Plant biotechnology

Producing edited plants that are better adapted to the environment.



Animal technology

Creating herds resistant to typical diseases



Ecological changes

Controlling or combating infectious diseases transmitted by insects



Medicine

It would allow for the correction of defective genes linked to diseases

