

Locus of interest

Undamaged double-stranded DNA
with a locus of interest (allele A)

Custom - designed ZFN

A

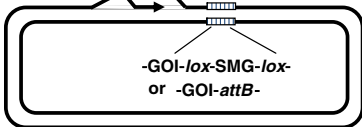


ZFN - induced DSB with in allele A

A



(Homology - directed repair)



Exogenous donor DNA carrying a GOI
and a SMG cassette (or a GOI and a SSR
recombination *attB* site) flanked by homologous
sequences of the allele A is used as template



Repairing of original DNA strands



Locus of interest

Conversion of DNA sequence from
A to A' at the locus of interest

A'

-GOI-lox-SMG-lox-
or -GOI-attB-