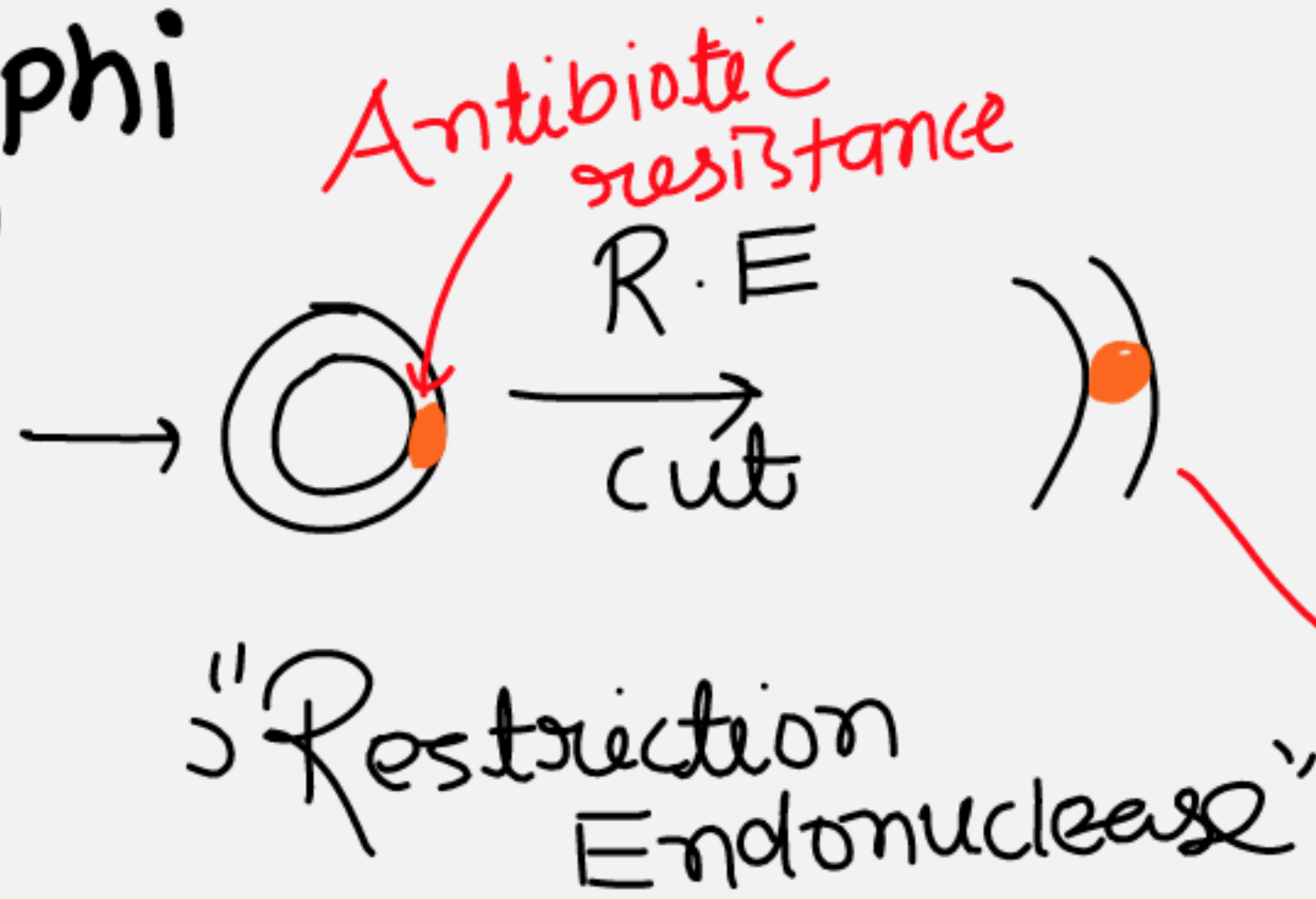
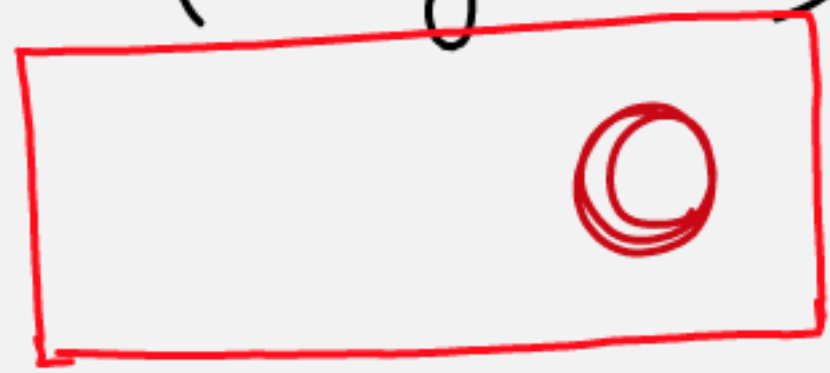
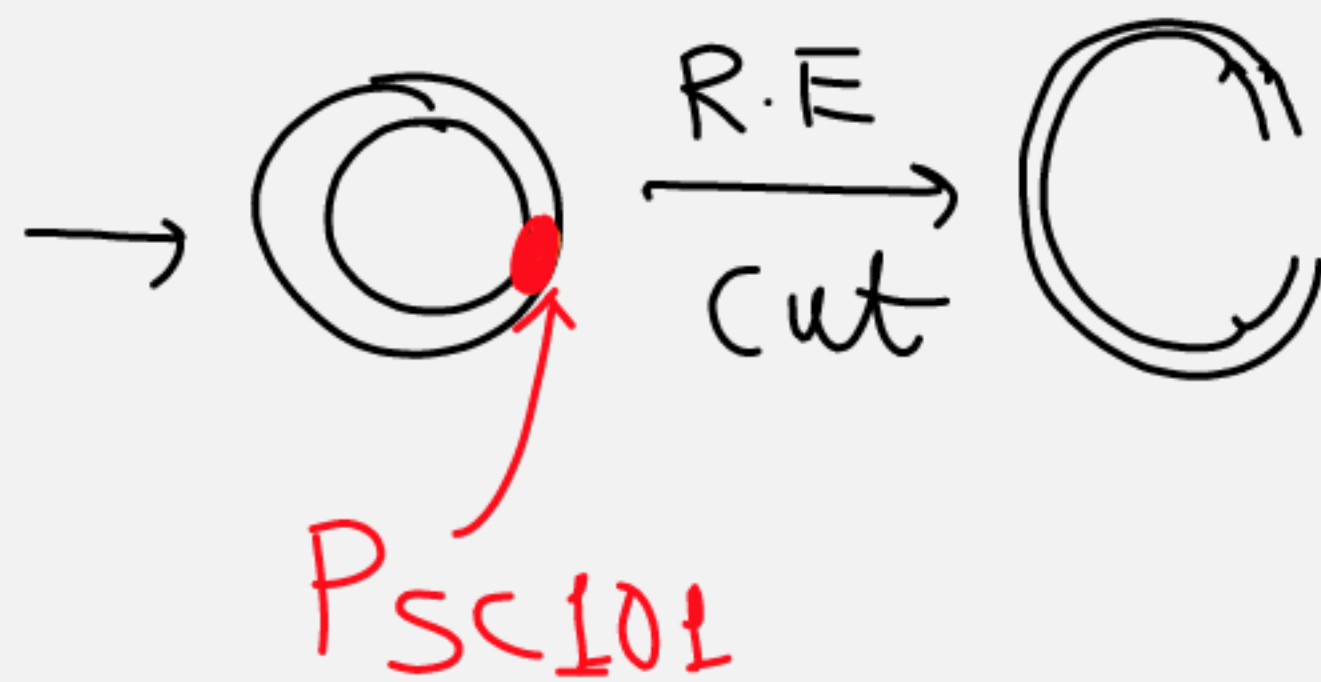


Salmonella typhi
(Flagellated)

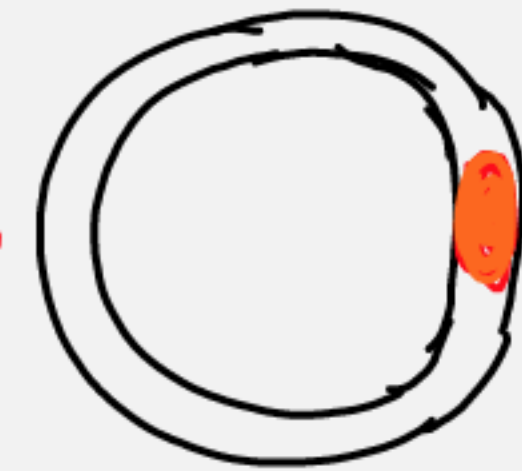


E. coli
(nonflagellated)

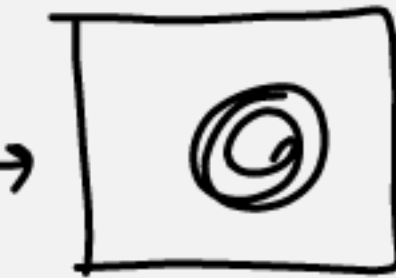


first
Recombinant DNA

ligase



E. coli

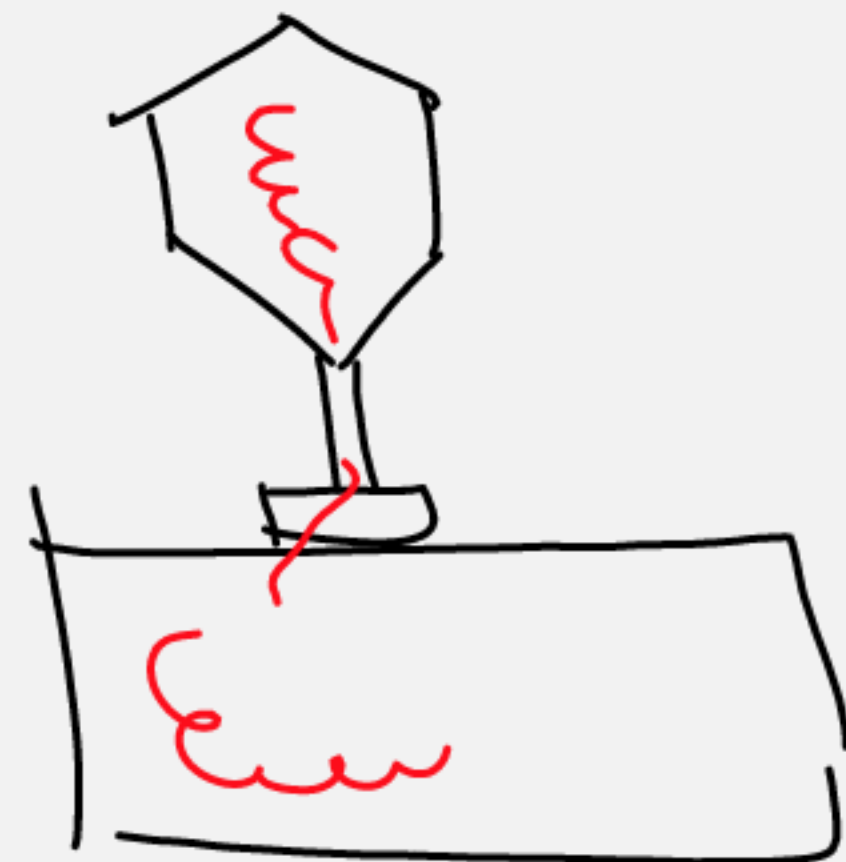


cloning
culture



product

SV-40



Tools of Recombinant DNA Technology

- 1) Enzymes 2) Vector DNA 3) Desired DNA 4) Competent DNA

Enzymes

- lysing enzymes
 - Plant cell - pectocellulase
 - Bacterial cell - lysozyme
 - Fungal cell - chitinase
- cleaving enzymes (cleave DNA)

Exonuclease

Removal of nucleotides from the end of the DNA

eg - Restriction Endonuclease

Endonuclease

(Cellulase, pectinase)
cut at specific position within the DNA

⇒ Hind-II

Recombinant DNA Tech

← AND MADAM DNA

(Molecular Knife / Molecular Scissors)
5' - 3'
4 - 8

Alex, Nathans, and Smith

Function: Cleave (EcoRI)
(sugar, PO_4^{3-})

Mg^{+2}

E. coli

CH_3



R.E

Cleave (cut)

1) Straight cut



2) Obligate cut



EcoRI

Methylation
(Add CH_3)

