

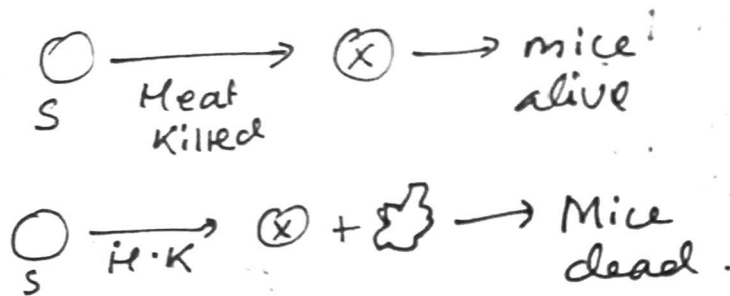
Bio Lab →

23rd Jan 2024

Preparation of Competent cell -

Competent → competency to uptake DNA.

Discussion of Avery Macleod experiment -



Streak

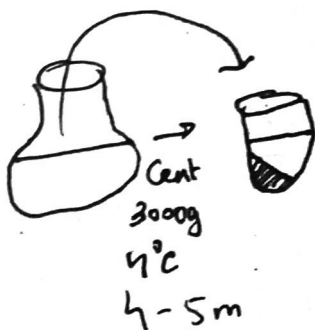
Find smooth variant.

Digested with DNAase, the transformation did not happen.

Cells cannot always uptake cells.

Competency is high in log phase - they secrete factors and accept factors.

Why will it accept foreign DNA? Does it not have immunity?



$MgCl_2$

$CaCl_2$

↓
Binds to membrane proteins,
does some modification.

DNA → -ve charge

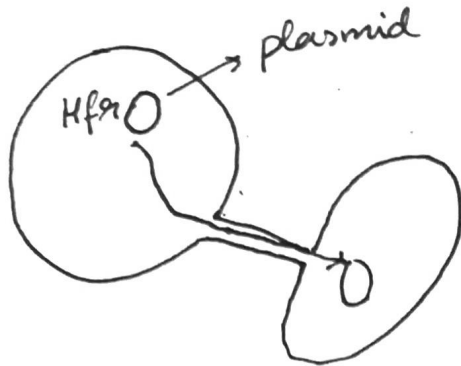
Bacterial surface → -ve charge

} They should repel.

Ca^{2+} ions may help reduce this repulsion.

Heating makes membrane protein more mobile (holes may be there) which helps in uptake.

Conjugation →



Transfer
By rolling circle
mechanism

The DNA ~~loop~~ loop is cut and the single strand passes through, is joined in other cell.

→ Secondary culture already given.



2x repeat procedure.

1.5 mL bacteria → Centrifuge → & throw supernatant → 1.5 mL bacteria → centrifuge → centrifuge → throw supernatant.

⊗ MgCl_2 procedure not known.

Could bind to other protein.

See streak on 31st. Complete notebook by this.

Quiz upcoming.