



Selecting Transformed Cells

How do we find the few bacteria that actually took up our recombinant DNA?

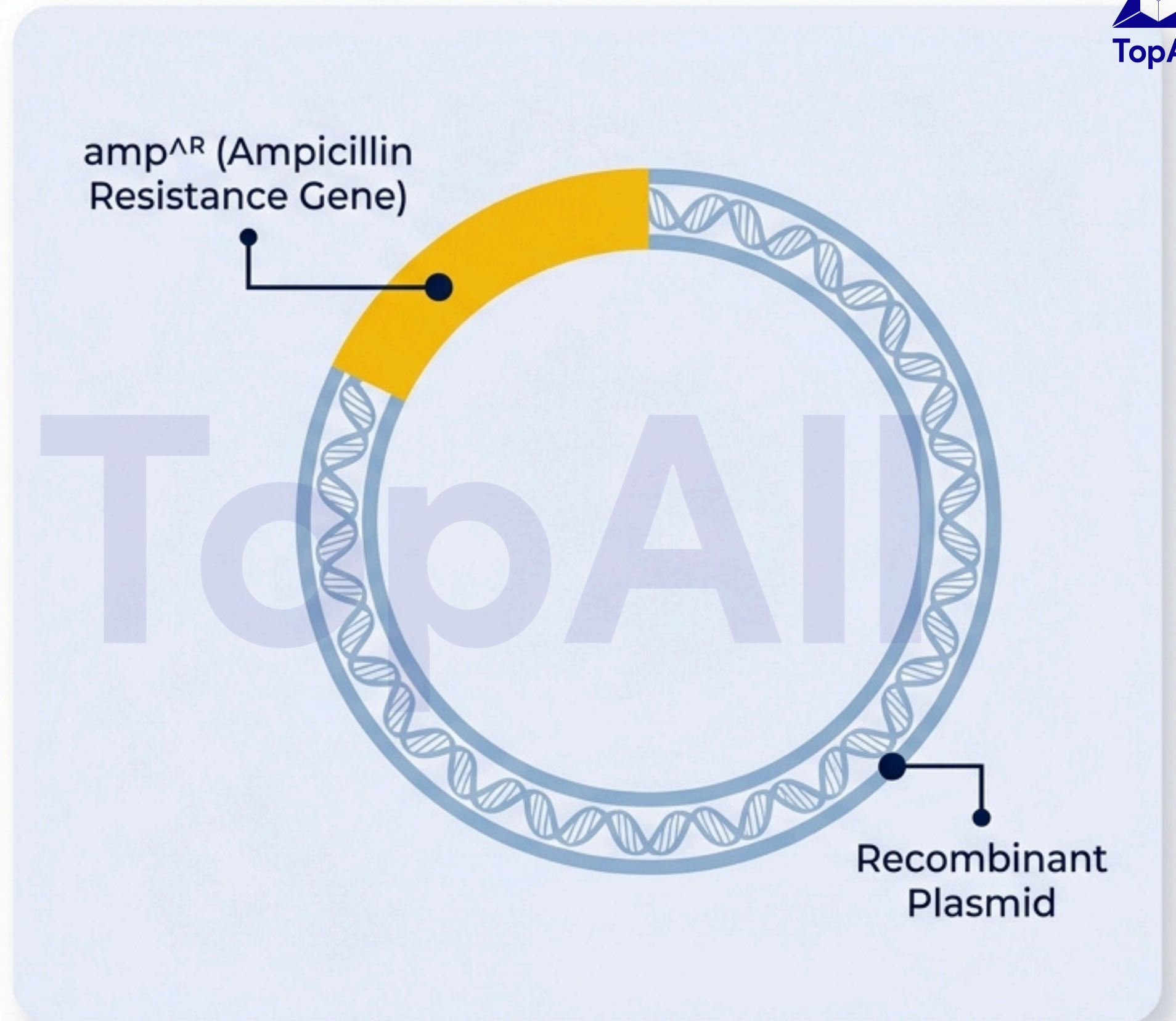
Recombinant DNA with ampicillin resistance

The Selectable Marker:

A built-in survival tool engineered into the plasmid.

Function:

This specific gene produces an enzyme that neutralizes the antibiotic ampicillin, granting the host cell immunity.





**You've Learned the Theory.
Let's Test Them Now.**

$$E=mc^2$$



Turn theory into marks with **unlimited MCQs, smart analysis, and focused revision.**

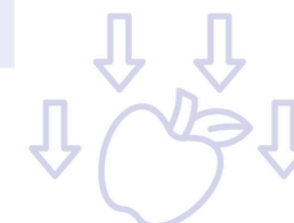
Practice Now



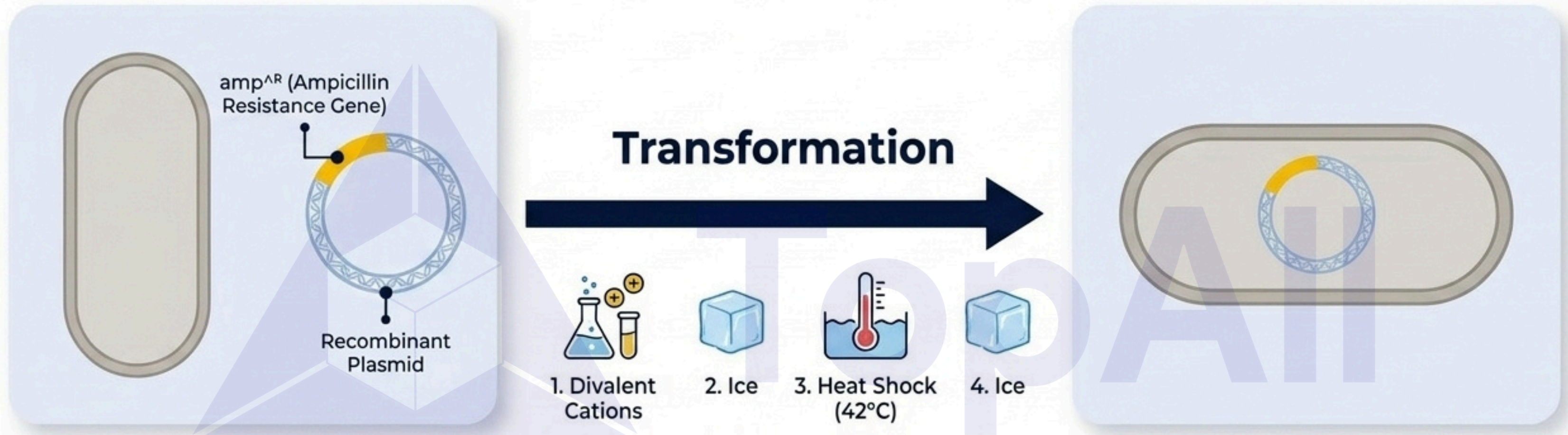
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Key Highlights

- » Free Study Material, Videos & Infographics
- » Push Your Limits with Level-Based Challenges
- » Climb the Leaderboard Among Fellow Aspirants
- » Practice Unlimited MCQs for NEET & JEE
- » Get Clear Explanations, Not Just Marks
- » Track Your Performance Smarter



E. coli transformation



- Normal *E. coli* cells lack resistance to antibiotics.

- By making the cells competent, a fraction will internalize the DNA.

- Their genetic makeup is now permanently altered.

Ampicillin agar plate

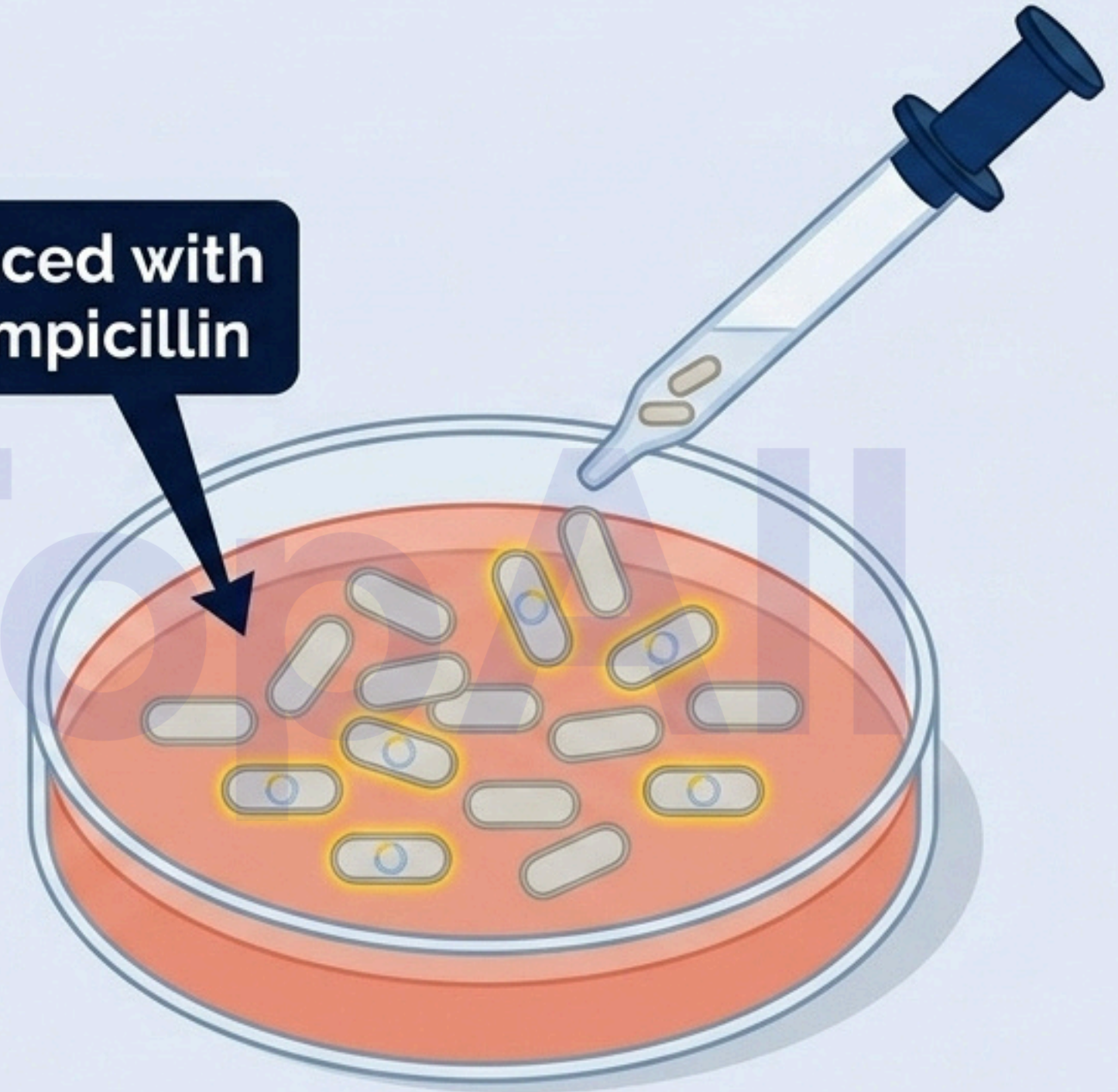
The Trap is Set

The agar medium contains lethal concentrations of the antibiotic ampicillin.

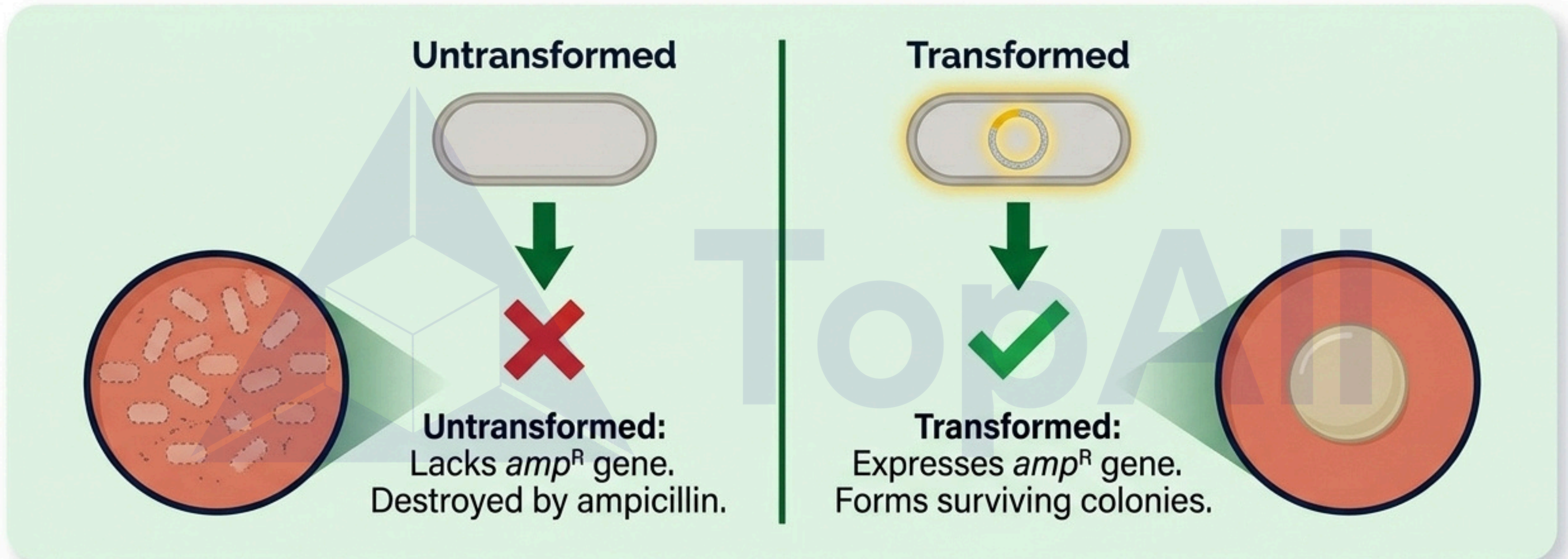
The Biological Filter

Normal bacteria cannot survive here. The ampicillin eliminates any cell that failed to take up the plasmid.

Laced with
Ampicillin



Transformants survive, untransformed cells die



NEET Key Takeaway

Selectable markers (*amp^R*) physically link our gene of interest to a survival trait, allowing us to easily isolate successful genetic modifications from failures.



You've Learned the Theory.

Now Let's Test It.

Reading notes gets you knowledge.

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Practice the moment you finish studying
Jump in while the concept is still fresh in your head

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