



Roche's Breakthrough Antibiotic

Roche, a Swiss healthcare giant, has discovered a groundbreaking [antibiotic](#), **Zosurabalpin**, targeting the notorious [gram-negative bacteria](#).

- It has shown promising efficacy against **drug-resistant Acinetobacter strains**, particularly **Carbapenem-resistant A baumannii (CRAB)** that is listed as a critical pathogen by the WHO.
- **Zosurabalpin's** action **disrupts the bacteria's outer membrane construction**, specifically targeting the transport mechanism of **lipopolysaccharide**, a crucial barrier in gram-negative bacteria.
- Bacteria are classified into two groups: **Gram-positive or Gram-negative**, depending on whether they retain a specific stain color. Gram-positive bacteria retain a **violet-colored stain**, while Gram-negative bacteria appear **pinkish or red**.
 - **Gram-negative bacteria** have a **thin peptidoglycan layer in the cell wall**, which is sandwiched between two lipid membranes, giving them a complex structure.
 - This outer membrane acts as a **barrier**, making them **more resistant to antibiotics**.

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