

ANTIBIOTICS

Resistance

- Ability to hydrolyse drugs (β lactamases)
- Genetic mutation *mec A* (Altered penicillin binding protein PBP2a)
- Altered cell wall permeability
- Barrier (biofilm)
- Eflux pump
- Ribosome alteration
- Altered peptidoglycan (VRE)

Mechanisms

① Cell wall synthesis

β lactams
penicillins
cephalosporins
carbapenems
vancomycin

② Nucleic Acid synthesis

• Folate synthesis
sulfonamides
trimethoprim

• DNA Gyrase
Quinolones
• RNA Polymerase
Rifampicin

③ Protein synthesis

50S
Macrolides = Erythromycin
Clindamycin

Linezolid
Chloramphenicol

30S
Tetracycline (aminoglycosides)
Tetracycline

