

{ BS = bacteriostatic
BC = bacteriocidal }

- BS Folic Acid Pathway**
- generally used in combination
- **Sulfamethoxazole (smx)** (inhibits conversion of PABA to DHF)
 - **Trimethoprim** (inhibits conversion of DHF to THF)
- S:T = 5:1 - dose conc
20:1 → Plasma conc

BC CELL MEMBRANE INTEGRITY

- **Daptomycin** → creates efflux pumps in the cell membrane which allows for K⁺ efflux & other ions influx to cause bacterial cell lysis
- **Polymyxins** → good for mult-drug resistance bacteria; it increases the permeability of the cell membrane by acting like a cationic detergent

BC CELL WALL SYNTHESIS

- [I] ↓ Peptidoglycan synthesis
- **Vancomycin**
 - **Fosfomycin**
- [II] ↓ Cross-linking of peptidoglycans (PG's)
- Natural Penicillins (PCN)
 - PCN G
 - PCN V
 - Antistaphylococcal PCNs
 - Oxacillin
 - Nafcillin
 - Dicloxacillin
 - Amino PCNs
 - Amoxicillin
 - Ampicillin
 - Antipseudomonal PCNs
 - piperacillin

PCNs = β -lactams

Cephalosporins

- 1st GEN
- Cefazolin
 - cephalexin
- 2nd GEN
- cefaclor
 - cefixitin
 - cefotetan
- 3rd GEN
- ceftriaxone
 - cefotaxime
 - ceftazidime
- 4th GEN
- cefepime
- 5th GEN
- Cefazoline

Carbapenems

- Doripenem
- Imipenem
- Meropenem
- Ertapenem

Monobactams

Aztreonam

DNA INTEGRITY BC

- **Metronidazole** - increases the formation of reactive oxygen species which breaks the DNA
- **Nitrofurantoin** - " " " " " " " "

mRNA SYNTHESIS BC
(inhibition of RNA polymerase)

- **Rifampin**

DNA GYRASE FUNCTION BC

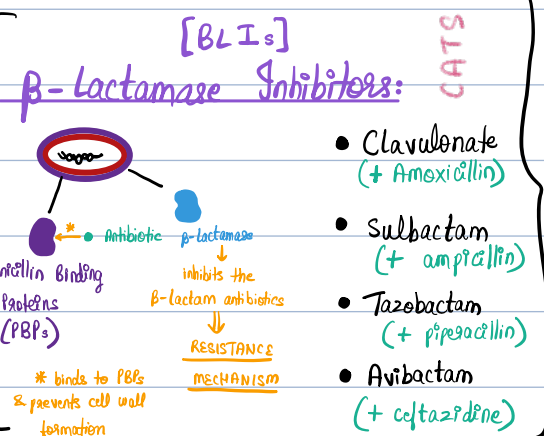
- **Fluoroquinolones**
 - 1st gen - ciprofloxacin
 - and gen - levofloxacin
 - gentofloxacin
 - moxifloxacin

50s RIBOSOME SUBUNIT BS

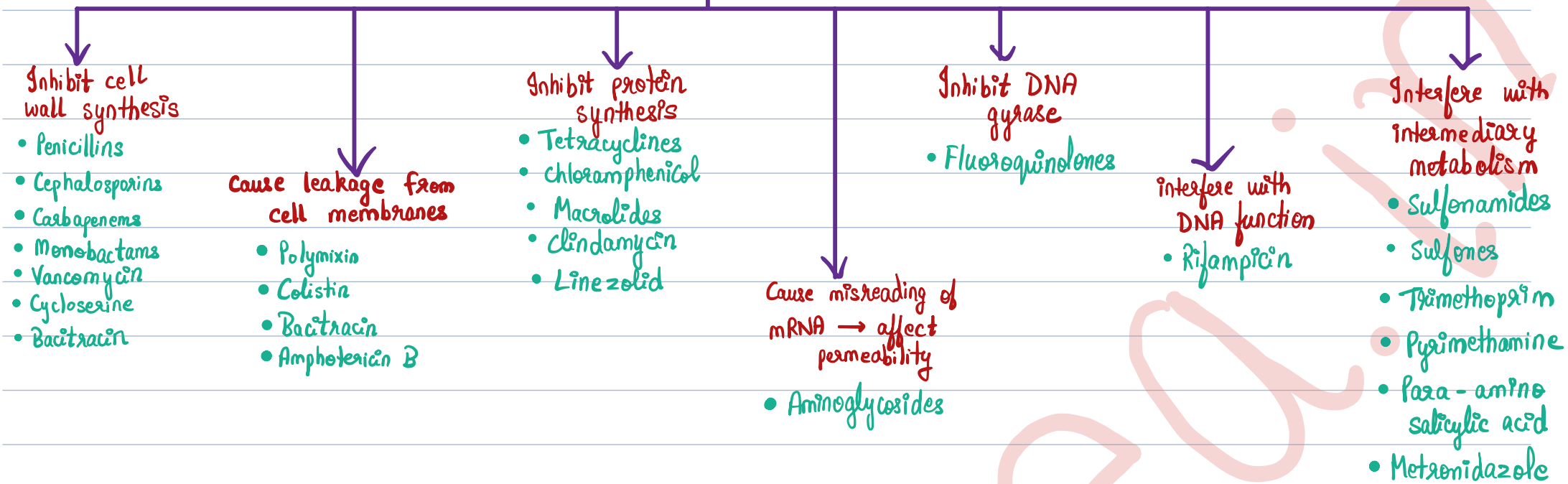
- Macrolides**
- Azithromycin
 - clarithromycin
 - Clindamycin
 - Chloramphenicol
 - linezolid

30s RIBOSOME SUBUNIT

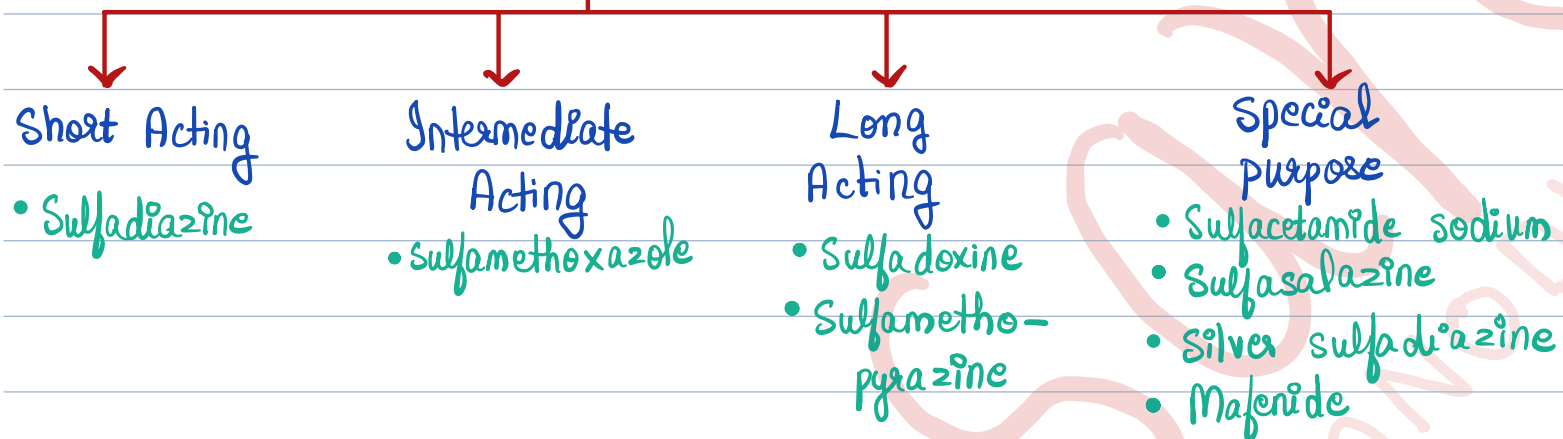
- Aminoglycosides**
- Tobramycin
 - Amikacin
 - Gentamycin
- Tetracyclines**
- Doxycycline
 - tetracycline
 - minocycline



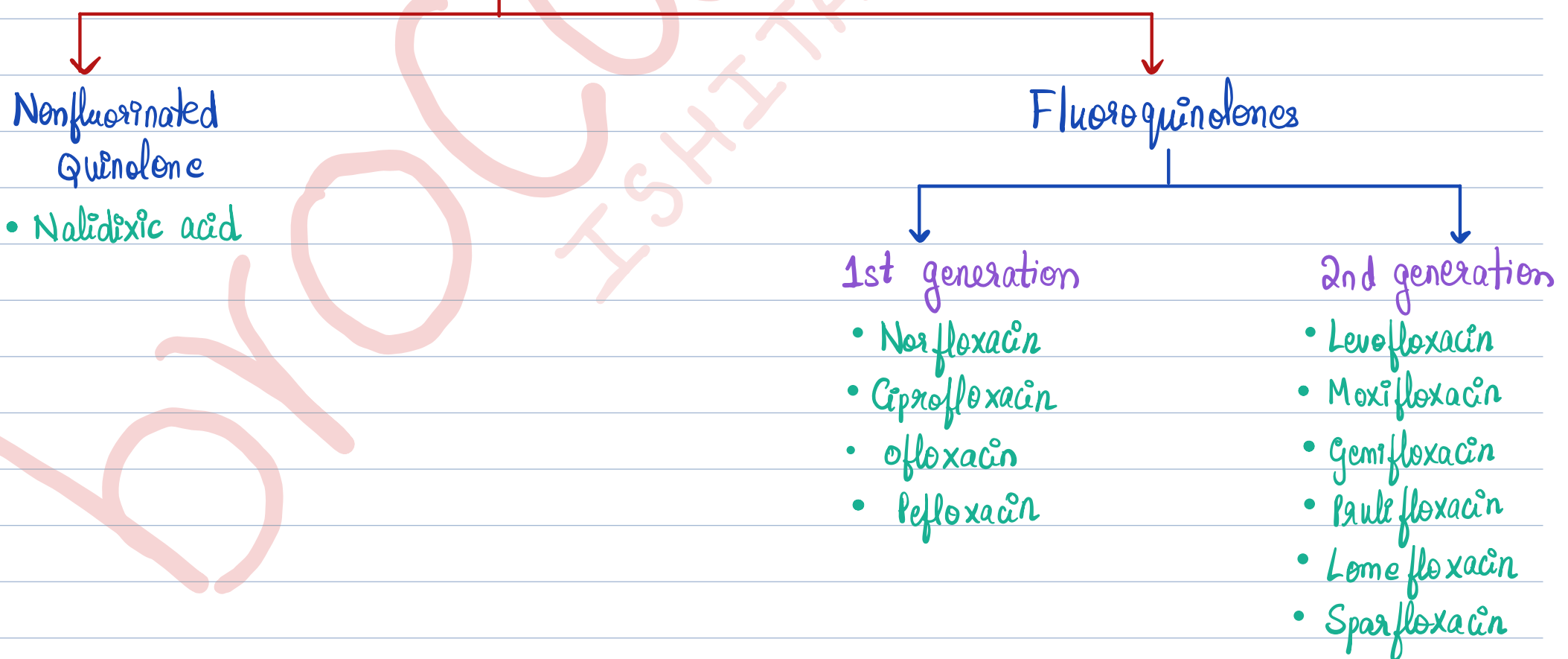
Antibacterial Drugs



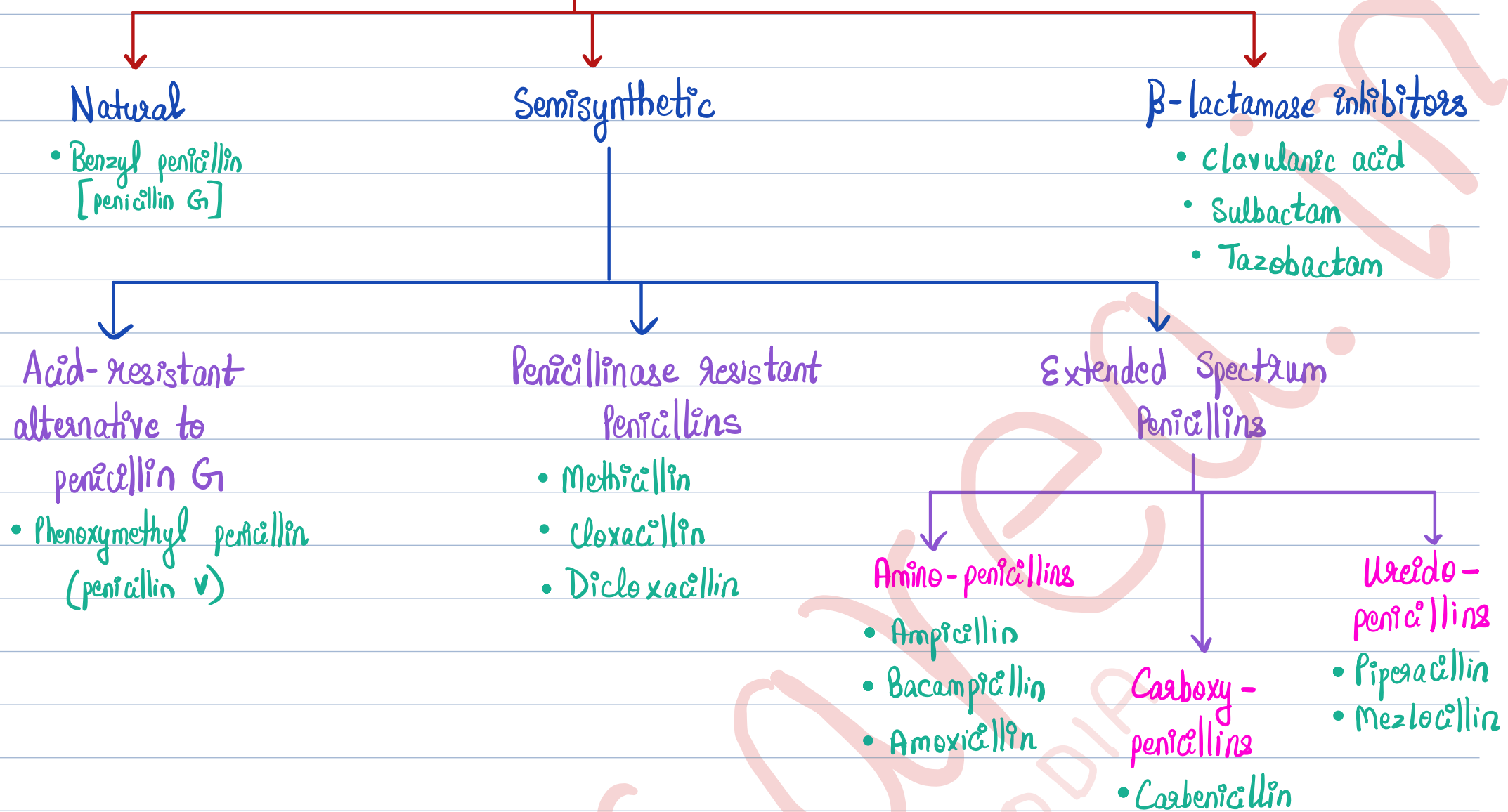
Sulfonamides



Quinolone Antimicrobials



Penicillins



Cephalosporins

