

**TABLE 11-1 Mechanisms of Action of Antimicrobial Agents**

**Inhibitors of Bacterial Cell Wall Synthesis**

Drugs that inhibit biosynthetic enzymes

Fosfomycin

Cycloserine

Drugs that combine with carrier molecules

Bacitracin

Drugs that combine with cell wall substrates

Vancomycin

Drugs that inhibit polymerization and attachment of new peptidoglycan to cell wall

Penicillins

Cephalosporins

Carbapenems

Monobactams

**Inhibitors of Cytoplasmic Membranes**

Drugs that disorganize the cytoplasmic membrane

Tyrocidins

Polymyxins

Drugs that produce pores in membranes

Gramicidins

Drugs that alter structure of fungi

Polynes (amphotericin)

Imidazoles (ketoconazole, fluconazole)

**Inhibitors of Nucleic Acid Synthesis**

Inhibitors of nucleotide metabolism

Adenosine arabinoside (viruses)

Acyclovir (viruses)

Flucytosine (fungi)

Agents that impair DNA template function

Intercalating agents

Chloroquine (parasites)

Inhibitors of DNA replication

Quinolones

Nitroimidazoles

Inhibitors of RNA polymerase

Rifampin

**Inhibitors of Ribosome Function**

Inhibitors of 30S units

Streptomycin

Kanamycin, gentamicin, amikacin

Spectinomycin

Tetracyclines

Inhibitors of 50S units

Chloramphenicol

Clindamycin

Erythromycin

Fusidic acid

**Inhibitors of Folate Metabolism**

Inhibitor of pteric acid synthetase

Sulfonamides

Inhibitor of dihydrofolate reductase

Trimethoprim