

Intrinsic Bacterial Resistance

Some *in vitro* resistance patterns can be predicted based on the organism's identity. This influences the drugs used in susceptibility testing and in treatment. Below is a table of important intrinsic resistances. These resistances should be known by clinicians in order to avoid inappropriate and ineffective therapy.

EXAMPLES OF INTRINSIC RESISTANCE PHENOTYPES

Organism	Intrinsic Resistance
Most Gram-negative Bacteria (<i>Enterobacteriaceae</i> , <i>Pseudomonas</i> spp.)	Penicillin G, Oxacillin, Macrolides (e.g. Azithromycin, Erythromycin, Tylosin) , Lincosamides (e.g. Lincomycin, Clindamycin) , Streptogramins (e.g. Virginiamycin), Glycopeptides (e.g. Vancomycin), Bacitracin
<i>Klebsiella</i> spp.	Ampicillin
<i>Proteus vulgaris</i>	Ampicillin, Cephalosporins I (e.g. Cephalexin), Polymyxins, Doxycycline
<i>Proteus mirabilis</i>	Tetracycline, Polymyxins, Doxycycline
<i>Serratia marcescens</i>	Ampicillin, Amoxicillin-Clavulanate (Clavulox), Cephalosporins I, Polymyxins
<i>Enterobacter</i> sp.	Ampicillin, Amoxicillin-Clavulanate, Cephalosporins I, Cefoxitin
<i>Pseudomonas aeruginosa</i>	Ampicillin, Amoxicillin-Clavulanate, Cephalosporins I and II (including Cefovecin), Tetracycline (including Doxycycline), Chloramphenicol, Trimethoprim (SXT)
<i>Haemophilus</i> spp.	Streptomycin, Kanamycin, Macrolides
<i>Campylobacter jejuni</i> & <i>coli</i>	Cephalosporins I, Trimethoprim
Most Gram-positive bacteria	Polymyxins, Quinolones/Fluroquinolones (e.g. Enrofloxacin, Ciprofloxacin, Difloxacin, Marbofloxacin)
<i>Streptococcus</i> spp.	Aminoglycosides (low level)(e.g. Gentamycin, Neomycin, Farnycetin/Soframycin), Polymyxins
<i>Enterococcus</i> spp.	Cephalosporins, Aminoglycosides (low level), Sulfonamides (<i>in vivo</i>), Trimethoprim (<i>in vivo</i>), Polymyxins, Clindamycin
<i>Listeria monocytogenes</i>	Cephalosporins, Lincosamides
<i>Salmonella</i> spp.	1 st and 2 nd Generation Cephalosporins and Aminoglycosides (<i>in vivo</i>)
<i>Pasteurella</i> spp.	Gentamycin

Reference: Antimicrobial Therapy in Veterinary Medicine - 4th Edition. Giguere S, Prescott J.F *et al* 2006. Page 31