BLOCK ONE JUNKTANK

1. Viruses are extracellular pathogenic organisms that are known to have the simplest structures
2. Acyclovir, a guanine analog enters into the cells facilitated exclusively by host cellular kinases
3. Viral thymidine kinases that activate acyclovir has greater affinity for the host cell than for the drug
4. Acyclovir is used in the treatment of hsv1, HSV2, with little effect on CMV and has no significant toxicity on the bone marrow
5. Unlike acyclovir, ganciclovir is activated by the viral phophotransferase enzyme to form a triphosphate moiety
6. Ganciclovir is used for the prophylaxis and treatment of CMV retinitis and other CMV infections in immunosuppressed patient
7. Valgancilovir, a prodrug of ganciclovir has high oral bioavailability and has decreased the use of IV forms of ganciclovir in end organ CMV dx
8. CMV is an opportunistic infection that occurs in both immunocompromised and immunocompetent px
9. Formivirsen is an antisense oligonucleotide that binds to the trna of CMV inhibiting early protein synthesis
10. Adefovir dipivoxil is an active drug that competitively inhibits HBV DNA polymerase ffg its phosphorylation by cellular kinases
11. Interferons are inducible proteins produced by the body in response to antigenic challenges and also from recombinant DNA tech
12. Interferons complexed with PEG to form peglyated interferon are contraindicated in pregnancy
13. Interferon alpha increase the activity of JAKS that phosphorylate stats to increase the formation of antiviral proteins
14. Lamivudine works as anti HBV and antiretroviral agent but has longer duration of action in HIV cells compared to HBV cells
15. Dosage adjustment of lamivudine is necessary in renal insufficiency
16. Amantadine is a potent direct sympathomimetic that induces the massive release of catechol amines
17. Amantadine inhibit uncoating of the viral RNA within infected host cells by blocking the M2 proton ion channel
18. Unlike zanamivir, amantadine and rimantadine are active against influenza A virus only
19. Oseltamivir, a neuraminidase inhibitor is active against both influenza A and B
20. Palivizumab is a monoclonal antibody that is active against respiratory syncytial virus
21. Mycolic acid composes of 2 branched , 3 OH fatty acids with chains made of 76-96 carbon atoms
22. Response of mycobacterial infections to chemotherapy is very fast
23. INH Rifampicin combo administered for 9 months will cure most cases of tb
24. INH penetrates into macrophages and is active against only the intracellular organism

25. INH acts by inhibiting the synthesis of mycolic acid and is prodrug that is activated by katg , the mycobacterial endoperoxidase e
26. INH is readily absorbed from the GIT with peak plasma conc of 2-5mcg/ml within 60-90 mins
27. There is an decreased toxicity of INH in slow acetylators
28. Giving INH with vitb6 helps to avoid INH induced hepatitis
29. Risk of hepatitis with INH is greater only in alcoholics
30. Katg mutants exhibit a low level of resistance to INH
31. Rifampicin is a full synthetic derivative of rifamycin
32. Rifampicin binds to the beta subunit of RNA dependent DNA polymerase
33. Rifampicin is well absorbed after oral admin and excreted mainly tru urine
34. Food decreases rifamin cpmax by two third
35. Ethambutol hcl is a water soluble and heat stable compound
36. Rifampicin , usually 100mg/d is given orally in mycobacterial infections
37. Resistance to ethambutol is due to deletion of the emb gene
38. About 20% of ethambutol is excreted in urine while 50% is tru the faeces
39. The most important side effect of pyrazinamide is optic neuritis
40. Pyrazinamide is concentrated by 30 fold in the lung epithelial lining fluid
41. Pyrazinamide is used as a prophylaxis of TB in combined with cirpofoloxacin
42. Cycloserine is contraindicated in epileptic px
43. Amikacin and streptomycin are active exclusively against extracellular cocci
44. Ethionamide is used in tx of both TB and leprosy
45. Capreomycin with the aminoglycoside causes nephron and oto toxicity
46. Rifapentine like rifamycin is a DNA polymerase inhibitor
47. Aminosalicylic acid is a folate synthesis inhibitor
48. Therapy for leprosy is based on monotherapy using dapsone
49. The elimination t1/2 of dapsone is 30-40hrs
50. The paucibacillary therapy involves the use of clofazimine
51. Clofazimine is given twice daily
52. One of the adverse effects of clofazimine is red colour urine
53. In pregnant women, use of streptomycin is contra indicated
54. An ideal antibiotic should be able to eliminate the normal flora of the host.
55. Penicillin unlike cephalosporin are bactericidal
56. Tetracycline clindamycin and chloramphenicol are bacteriostatic in nature
57. The beta-lactam ring is joined to a five-membered thiazolidine ring in penicillin
58. Penicillin are broad spectrum abx isolated from penicillum mutatum
59. Penicillins are the most widely used abx and have the least side effects
60. Narrow spectrum penicillin are active agaibst G+ve and G-ve cocci
61. Penicillin V is given tru IM or IV while penicillin G is given tru oral bcos the latter is not stable in the GIT

62. Second group of penicillin which include nafcillin are beta lactamase resistance
63. Methicillin is nephrotoxic while nafcillin causes neutropenia
64. Beta lactamase resistance penicillin are broad spectrum acting abx
65. Extended spectrum penicillin have good oral absorption, are stable in gastric juice nut are susceptible to beta lactamase
66. Ampicillin and clavulanic acid act synergistically bcos the latter protects the former from hydrolysis
67. Carbenicillin like ticarcillin is active aginst straisn of pseudomonas and enterobascters
68. All penicillins are given before food except amoxicillin bcos their absorption is affected by food
69. Penicillins can cross the placental barrier thus are teratogenic
70. Major route of elimination of penicillins is the kidney , 90% tubular secretion and 10% glomerular filtration
71. Probenecid inhibits tubular secretion of penicillins and thereby prolong their duration of action
72. The most severe and impt side effects of penicillin is hypersensitivity which ranges from maculopapular rash to angioedema
73. Interstitial neuritis is caused by methicillin
74. Penicillin G is not acid resistant it is acid sensitive.
75. Benzylpen7icillin is broken down by stomach acid and destroyed by staphylococcus penicillinase so it can be given by IV.
76. Benzylpenicillin is used for croupous and focal pneumonia, skin infections, soft tissue and mucous membranes, peritonitis, cystitis, syphilis, diphtheria, and other infectious diseases.
77. The β-Lactamase resistant penicillin tend to be comparatively lipophilic molecules that do not penetrate well into Gram –ve bacteria
78. If you compare with ampicillin, amoxicillin is better absorbed through gut wall.
79. Penicillins are drug of choice for anaerobic anthrax
80. Augmentin contains a combination of amoxicillin(500mg) and a β-lactamase inhibitor, clavulanic acid (125mg) used in the treatment of Feverish patients with neutropenia from cancer chemotherapy
81. Dilatation of the airways is a common side effect of the penicillins
82. Broad spectrum penicillins like Ampicillin, when administered orally, alters the bacterial flora in the intestines and leads to GIT disturbances like diarrhoea.
83. Immediate hypersensitivity occurs within 20 min. Of parenteral administration of penicillin and is characterized by the pruritus, skin rashes, wheezing, rhinitis, sneezing.
84. Penicillins have a *bicyclic structure* consisting of a β-lactam ring fused to a Thiazolidine ring.
85. The strained β-lactam ring reacts irreversibly with the transpeptidase enzyme responsible for the final cross-linking of the bacterial cell wall.
86. Penicillin can be made more resistant to acid conditions by incorporating an *electronwithdrawing group* into the acyl side chain.
87. *Stereic shield* can be added to penicillins to protect them from bacterial β-lactamase enzymes.

88. *Broad spectrum activity* is associated with the presence of an α-hydrophilic group on the acyl side chain of penicillins.
89. Clavulanic acid is a powerful reversible inhibitor of beta lactamase enzyme
90. Methicillin is acid labile
91. Parasitic infections are the most prevalent infections throughout the world yet the most neglected
92. Filarial worms are tissue dwelling roundworms that are transmitted by insect bites, however there are no effective drugs against the larvae but the adult worms
93. Most roundworms are best treated with benzimidazoles
94. Roundworms affect about 25% of the world population and flourish in the warm and humid climates
95. Hookworm infestations flourish in the mines and large mountains thus referred to as miner or tunnel dx
96. Hookworm larvae live in the soil and infect by direct entry in to the git
97. Cutaneous larva migrans is exclusively treated with oral thiabendazole
98. Mebendazole unlike abendazole can be used in tx of infection caused by Ancylostoma braziliensis
99. Whipworm is rarely found with ascaris and hookworm in the warm and humid climate
100. Adult whipworm may lodge in the appendix and penetrate the bowel causing appendicitis and peritonitis respectively
101. Tx of trichuriasis is most effective with albendazole, mebendazole, or oixantel pamoate but not pyrantel pamoate
102. Tx of choice for infestation by strongyloides stercolaris (threadworm) is by using ivermetin
103. The DOC for infestation by enterobius vermicularis (pinworm) are mebendazole, albendazole and oxantel pamoste
104. Combination with strict personal hygiene is not necessary in tx of pinworm infestation
105. Albendazole and mebendazole are effective against the intestinal forms of trichina worm infestation
106. Corticosteroid may not be effective against manifestation of established infection in trichina worm infestation
107. W. Bancrofti and B. Malayi are effectively treated exclusively with ivermectin
108. Diethylcarbamazine and corticosteroid are required in the tx of loasis, the latter needed to control acute rxn
109. Ivermectin is the DOC for tx of onchocerciasis
110. Both ivermectin and DEC kill only the microfilaria worms
111. Ivermectin is preferred over DEC cos it produces milder systemic rxn and fewer ocular complications
112. Cestodes live is adult in the GIT of their intermediate host and as cysts in the organs of their definitive hosts
113. All cestodal infestations are associated with vitb12 deficiency
114. Praziquantel uis the DOC for tx of all tapeworms including echinococcosis and cysticercosis

115. Praziquatel and niclosamide are the DOC for the tx of infection by T.saginata
116. T. Solium has the unique target of cysticersosi thus praziquantel is the preferred DOC
117. There is a high incidence of megaloblastic anemia is infection with fish tapeworm cos the worm uses vitb6
118. E granulosus , a cystic hydatid dx can be treated successfully with albendazole often in combo with surgical resection
119. All trematodes have snails as their intermediate hosts
120. Schistosoaml dx primarily involves the liver, spleen, Git, bone marrow and the genitourinary tracts
121. DOC for all schistosoamal infections is praziquantel cos it is safe and effective at any dose regimen
122. Eating undercooked crabs expose man to infection by lung flukes
123. DOC for all intestinal flukes is praziquantel
124. E. Histolytica and e. Dispar are major causes of diarrhoea and are susceptible to metronidazole
125. Chagas dx caused by T. Cruzi can be treated with nifurtimox and benzimidazole over a long period
126. Benzimidazoles are effective against both larval and adult stages of nematodes
127. Mebendazole is contra indicated in pregnant women and children under 5yrs bcos it is a potent embryo toxin and teratogen
128. Oral bioavailability of albendazole is decreased with a fatty meal
129. Albendazole can be used in treating cyticercosis that results from beef tapeworm
130. There is no need for routine liver function test in protracted use of albendazole
131. Ivermectin is highly effective in tx of cestode and trmatode infections
132. Mazzotti like rxn is an antigenic rxn that results from dead or dying microfilaria common with the use of ivermectin and DEC
133. Ivermectin binds with high affinity to GABA gated chloride channels in nematode to cause paralysis
134. Ivermectin prevents microfilaria mediated ocular damage but increases human to vector transmission
135. Praziquantel should be avoided in pregnancy bcos it has been shown to be teratogenic
136. Pyrantel like oxantel pamoate is not recommended for use in pregnancy
137. Only oxantel pamoate is effective against whipworm
138. DEC is contraindicated in impaired renal function bcos it is rapidly eliminated by the kidney
139. Ivrmectin does not provide a good alt to DEC for the treatment of loaisis
140. Piperazine causes flaccid paralysis that results in expulsion of worms by peristalsis and also act as a GABA antagonist
141. Piperazine is preferred in tx of ascariasis and enterobiasis in pregnant women
142. Although an alt drug to praziquatel, niclosamide is cheaper but not better
143. Metrifonate is a potent cholinesterase inhibitor and is effective in tx of S.hematobium
144. Oxamniquine is an alt drug to praziquantel for S. Hematobium infestation

145. Bithionol, DOC for fascioliosis, is an alt drug for pulmonary paragonimiasis
146. Methylation of OH group at the 6th position of eryhthromycin forms clarithromycin, a 14 carbon membered ring
147. Reversible cholestatic jaundice occurs mostly in the estolate form of erythromycin
148. Action of chloramphenicol with erythromycin is synergistic bcos they both acts at the 50s ribosomal subunit
149. Gram +ve bacteria accumulate about 100 times more erythromycin than gram -ve orgs because they have thick cell wall
150. Erythro is used as 1st line antistrep agent in px with penicillin allergey
151. One of the non-microbial ppts of eryhthromycin is its ability to cause diahhea
152. Azithromycin is more effective than erythromycin and clarithryomycin in respiratory infections becos it has action on h. Influexa and m. Catarrhalis
153. Macrolides generally have mild effects on viruses, yeasts and fungi
154. At low ph the absorption of erythromycin is increased
155. Only the stearate form of eryhthromycin can be taken exclusively wwithout food
156. The concentration of erythromycin in the middle ear is too low for the tx of otitis media due to H.influenza
157. The major route of elimination of all macrolides is through the bile
158. Erythromycin is the DOC for diphtheria and pertussis
159. Fq has replaced erythro in the tx of campylobacter infections
160. Tx of mycobacterium infection always include the use of rifampicin
161. Azithromycin is free of drug interactions of the macrolides but caution is noted when use
162. Ketolides were developed to overcome macrolide resistance
163. Like macrolides, ketolide inhibit protein synthesis at the 50s ribosomal subunit but they demonstrate a higher binding affinity
164. Cethromycin is a widely used ketolide
165. The major AE of the lincosamide is pseudomembranous colitis bcos clostiridum defficiile is resistant to the drugs
166. Lincosamides have mild effect on aerobic bacteria
167. Lincosamides are mainly used in staph infections of the joints and bones bcos the accumulate well
168. Oxazolidinones inhibit protein synthesis by binding at the A site of 50s ribosomal subunit
169. Linezolid is the first oxazolidinone to be approved for the tx of gram +ve bacterial infections
170. Linezolid has a narrow spectrum of in vitro activity
171. Cross resistance btw linezolid and other classes of abx that bind to 50s is likely to occur
172. Linezolid is bacteriostatic against entero and staphylo but cidal against strepto
173. Linezolid is an irreversible non selective monoamine oxidase inhibitor
174. Radezolid is a novel oxazolidinone with broader spectrum of action and increased gram +ve activity

175. The activity of torezolid against staph aureus is 4 fold more than linezolid and 8fold more with enterococci
176. Posizolid has excellent activity against all common gram +ve bacteria regardless of cross resistance
177. Streptogramins consist of quinupristin and daldopristin the ration of 7:3
178. Streptogramins are semisynthetic derivatives of naturally occurring pristinamycin
179. The combination of q and d is bactericidal against strep and many strains of staph but bacteriostatic against E faecium
180. Dalfopristin bind to the same site as macrolides on the 50s ribosomal subunit
181. An addictive effect results from combination of q and d
182. They bind 30S ribosomal subunits to inhibit binding of messenger RNA thus interfering with the initiation complex
183. Interfere with the assembly of polysomes which results in accumulation of functional ribosomes.
184. Beta lactam antibiotics which weaken or inhibit bacterial cell wall synthesis facilitate passive diffusion of aminoglycosides if given together - synergistic action.
185. Aminoglycoside are highly polar basic drugs with poor oral bioavailability
186. They are not absorbed orally, administered parenterally or applied locally except Neomycin which is too nephrotoxic to be given by injection.
187. Rapidly excreted unchanged in urine, almost completely by glomerular filtration hence dose adjustment is needed in renal insufficiency
188. Renal clearance of aminoglycosides is approximately one thirds that of creatinine
189. They can be removed from the body partly by hemodialysis and peritoneal dialysis.
190. Aminoglycosides exhibit concentration and time dependent killing and also possess significant post-antibiotic effect
191. Even though they have a short half-life, aminoglycosides can be given in a single daily dose
192. Aminoglycosides are particularly ineffective in treatment of urinary tract infections .
193. Of the aminoglycosides, Netilmycin claimed to have low ototoxicity which is irreversible
194. Neomycin, gentamicin, amikacin and tobramycin are more nephrotoxic than streptomycin which is reversible if drug promptly discontinued
195. Tobramycin least likely to produce neuromuscular blockade effect of aminoglycoside howereve can be treated tru administration of calcium and neostigmine
196. Gentamicin is highly effective against mycobacterial TB
197. Sisomicin is more potent on pseudomonas and β-hemolytic streptococci
198. Tobramycin is Combined with exclusively with ticarcillin in P.aeruginosa infections.
199. Amikacin has the Widest spectrum of activity and it's the least susceptible to inhibiton
200. Netilmicin is Relatively resistant to aminoglycoside inactivating enzymes
201. Neomycin a micromonospora derivative is too toxic for parenteral use , limited to topical use
202. Framycetin is very similar to neomycin but too toxic for systemic administration
203. Fluoroquinolones are narrow-spectrum antibiotics that play an important role in treatment of serious bacterial infections

204. Fluoroquinolones are often used for genitourinary infections, and are widely used in the treatment of hospital-acquired infections associated with urinary catheters
205. Classification of fluoroquinolones based on generation is due to their increased effect on gram +ve organisms
206. The addition of the fluorine atom at C5 distinguishes the successive-generation fluoroquinolones from the first-generation quinolones
207. For many Gram-negative bacteria, DNA gyrase is the target, whereas topoisomerase IV is the target for many Gram-positive bacteria
208. The quinolones are absorbed well in the gut and penetrate tissues well, although the presence of antacids, dairy products, vitamins and citric acid increase gastrointestinal absorption.
209. Unlike ciprofloxacin, renal excretion is the primary route of elimination for most quinolones.
210. One of the most attractive pharmacokinetic characteristics of fluoroquinolones is their large volume of distribution
211. Fluroquinolones act like gaba receptor antagonist
212. Nalidixic Acid can be used for the treatment of systemic infections.
213. Ciprofloxacin is The most potent of the fluoroquinolones for P. Aeruginosa but has a short post antibiotic effect
214. Moxifloxacin is the most potent fluoroquinolones against M. Tuberculosis with Poor activity against P.aeruginosa.
215. Fqs are contraindicated in children under 18 and pregnant women
216. Fluoroquinolones should not be administered to pregnant or lactating women but should be given to arrhythmic patient.
217. In tetracycline, Drug efflux by efflux proteins is the major mechanism of action
218. Tetracyclines use Passive diffusion into gram positive bacteria through hydrophilic channels
219. They bind to bacteria 30s ribosomal subunit and Prevents acceptance of trna at A site.
220. Minocycline, doxycycline are more active because they are more lipophilic
221. Like linezolid, bioavailability for minocycline is 100%
222. Tigecycline is only available parenterally with no GI absorption.
223. Tetracyclines are First line therapy for rickettsia, mycoplasmas, and chlamydia.
224. Tetracyclines cause Permanent brown coloration of teeth in adult
225. Minocycline is usded in the chemotherapy of type2 DM and as antimalarial
226. Chloramphenicol, a narrow spectrum antibiotic has a nitrobenzene moiety that is responsible for antibacterial activity and the bitter taste
227. It is Bacteriostatic to most organisms but bactericidal to H. Influenzae & N. Meningitides
228. It is Widely distributed in body compartment as well as in CSF like tetracyclines
229. It undergoes glucoronide conjugation in liver, so dose needs to be lowered in neonates and cirrhotics
230. Chlorampenicol is a potent enzyme inhibitor and inhibits metabolism of: ◦Morphine, Chlorpropamide Warfarin
231. It is Rapidly & completely absorbed after oral ingestion but does not Cross placenta and secreted in milk and bile

232. It Inhibits protein synthesis by binding to 50 S ribosomal subunit of the microbe

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1. Which of the ffg is not active against streptococci
   a) Sparfloxacin
   b) Balofloxacin
   c) Grepafloxacin
   d) Levofloxacin
   e) Ciprofloxacin
2. The ffg are approaches used in the tx of hookworm dx except
   a) Proper diet
   b) Calcium supplement
   c) Iron supplement
   d) Tx with albendazole
   e) Tx with mebendazole
3. Which of the ffg is common among school children
   a) Roundworm
   b) Hookworm
   c) Whipworm
   d) Pinworm
   e) Threadworm
4. The ffg can be treated with praziquantel except
   a) Clonorchis sinensis
   b) Opisthorchis viverrini
   c) Opisthorchis fellineus
   d) Fasciola hepatica
5. Which of the ffg is not used in the tx of giardiaisis
   a) Metronidazole
   b) Tinidazole
   c) Furazolidinone
   d) Albendazole
6. Which of the ffg is not used in the tx of rhodeshian or east African trypanosomiasis
   a) Melarsoprol
   b) Eflornithine
   c) Suramin
   d) Metronidazole
7. Leishmaniasis can be treated with the ffg except
   a) Pentavalenmt antimonials
   b) Sodium stuibogluconate

c) Meglumine antimonite
d) Magnesium stibogluconate

8. Which of the ffg is not a ppt of aminioglyciside
   a) Bactericidal antibiotics
   b) Interfere with protein synthesis
   c) Used to treat aerobic Gram +ve bacteria
   d) Resemble each other in mechanism of action, pharmacokinetic, therapeutic and toxic properties
   e) Exhibit ototoxicity and nephrotoxicity
9. Aminoglycosides act on the ffg except
   a) Proteus, Pseudomonas
   b) E.coli, enterobacter
   c) Klebsiella
   d) Shigella
   e) Staph aureus
10. Whch of the ffg is nmot a mechanism of resistance of aminoglycosides
   a) Synthesis of plasmid mediated bacterial transferase enzyme
   b) ↓ transport into bacterial cytosol
   c) Deletion/alteration of receptor protein on 30 S ribosomal unit by mutation: prevents attachment
   d) Synthesis of chromosomal mediated bacterial transferase enzyme
11. Aminoglycoside is contraindicated in the ffg except
   a) Pregnancy: foetal ototoxicity
   b) Elderly patients
   c) Those with kidney disease
   d) Cautious use of muscle relaxants
   e) Those with liver disease
12. Which of the lincosamide is used in animals
   a) Lincomycin
   b) Clindamycin
   c) Pirlimycin
   d) Erythromycin
13. Absorption of tetracycline is impaired by the ffg except
   a) Divalent,
   b) Trivalent
   c) Dairy products
   d) Ca supplements
   e) Antacids
14. Which of the ffg is not an oral form of erythromycin
   a) Stearate salt

b) Enteric coated tab
c) Lactobionate
d) Esterified prodrug

15. Which of the ffg is not an adverse effect of the macrolides
a) Cardiac arrhythmia
b) Cholestatic jaundice
c) Transient auditory loss
d) Stimulation of git motility