

## PHARMACOLOGY

1. The elimination of a drug is described as being heavily dependent on phase II metabolic reaction. Which of the following is a phase II reaction as far as drug elimination goes?

- a. Acetylation
- b. Hydrolysis
- c. Oxidation
- d. Deamination

2. Which of the following ligands is correctly coupled with its receptor signaling mechanism?

- a. Thyroid hormones: G protein coupled receptors
- b. Growth hormones: Tyrosine kinase receptors
- c. Acetylcholine: Tyrosine kinase receptors
- d. Adrenaline: Ion channel linked receptors

3. Tolerance and drug resistance can be a consequence of which of the following conditions?

- a. Activation of a drug after hepatic first pass
- b. Drug synergism
- c. Receptor downregulation
- d. Increased Bioavailability

C

4. All of the following statements are true regarding Competitive reversible pharmacological antagonist, EXCEPT:

- a. It increases the efficacy of an agonist
- b. It causes a parallel shift of the dose response curve of an agonist to the right
- c. It decreases the potency of an agonist
- d. Its effect can be overcome by increasing the agonist concentration

5. Which Beta-adrenergic blocker also competitively blocks Alpha- adrenergic receptors?

- a. Propranolol
- b. Pindolol
- c. Nadolol
- d. Labetalol

**D**

6. Physostigmine is the antidote for atropine poisoning, Neostigmine is not suitable as an antidote to atropine because it cannot overcome the atropine's adverse effect on which of the following?

- a. Central nervous system

**A**

- b. Smooth muscle
- c. Skeletal muscle
- d. Cardiovascular system

7. Which of the following administration routes is most likely to subject a drug to a "first - pass" effect in the liver?

- a. Intravenous
- b. Inhalation
- c. Oral
- d. Sublingual

C

8. The best drug for distinguishing between myasthenia crisis (insufficient therapy) and cholinergic crisis (excessive therapy) is:

- a. Physostigmine
- b. Echothiophate
- c. Edrophonium
- d. Atropine

9. A patient is started on therapy with abciximab. Which one of the following best describes how this drug causes its desired effects?

- a. Inhibits cyclooxygenase
- b. Blocks thrombin receptor selectively
- c. Blocks ADP receptors
- d. Blocks glycoprotein lib/IIIa receptors

10. Which of the following sympathomimetic drug is a non- Catecholamine?

- a. Ephedrine
- b. Noradrenaline
- c. Dopamine
- d. Adrenaline

11. Which class of drug can mask one of the major symptoms of hypoglycemia in a person with diabetes mellitus?

- a. Alpha-adrenergic agonist
- b. Alpha-adrenergic antagonist
- c. Beta-adrenergic agonist
- d. Beta-adrenergic antagonist

12. A patient with essential hypertension is starting diuretic therapy. He has a history of calcium oxalate renal stones. Which of the following diuretics would be most appropriate to give this patient?

- a. Spironolactone
- b. Hydrochlorothiazide
- c. Furosemide
- d. Acetazolamide

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14. A 45 years old man with long standing diabetes mellitus is admitted to ward from emergency department and you wish to examine his retina for possible

changes. Which of following drugs is a good choice when pupillary dilatation but not cycloplegia is desired?

- a. Norepinephrine
- b. Phenylephrine
- c. Pilocarpine
- d. Tropicamide

15. The most common cause of digoxin intoxication, when the drug is used for long term management of chronic heart failure, is coadministrations of which of the following?

a.

Potassium sparing diuretics (Spironolactone)

b.

Hepatic mixed function oxidase Inducers

c.

Potassium wasting diuretics

d.

Angiotensin-converting enzyme inhibitors/ angiotensin receptor blockers

16. Administration of captopril, a drug which inhibits angiotensin converting enzyme, results in:

a. An increase in extracellular fluid volume

b. A decrease in the rate of aldosterone secretion

c. Increase in arterial blood pressure

d. Peripheral vasoconstriction

17. Which of the following anti-hyperlipidemic drugs causes hyper-uricemia and may precipitate gout?

- a. Niacin
- b. Fenofibrate
- c. Ezetimibe
- d. Colestipol

18. A 30 years old woman is taking oral contraceptives. Which of the following drugs is unlikely to reduce the effectiveness of the oral contraceptives?

- a. Carbamazepine
- b. Phenytoin
- c. Ketoconazole
- d. Phenobarbitone

19. Which of the following side effects caused by nitro glycerin can be counteracted by combining beta blockers in case of angina?

- a. Dizziness
- b. Reflex tachycardia
- c. Tolerance
- d. Methemoglobinemia

20. A 45 years old patient was taking a drug for atrio-ventricular arrhythmias and he developed tinnitus, headache, disorientation and psychosis, which of the following drugs was he most likely prescribed?

- a. Propranolol
- b. Lidocaine
- c. Quinidine
- d. Amiodarone

21. Carbamazepine is used for the treatment of all EXCEPT:

- a. Bipolar depression
- b. Partial seizures
- c. Trigeminal neuralgia
- d. Absence seizures

22. A 72 years old man develops acute urinary retention and blurred vision after taking an antidepressant for 5 days. Which of the following medications is most likely to cause such side effects?

- a. Amitriptyline
- b. Venlafaxine
- c. Escitalopram
- d. Bupropion

23. Following drugs are used for treatment of migraine EXCEPT.

- a. Furosemide
- b. Ergotamine
- c. Sumatriptan
- d. Propranolol

24. An 18 years old girl who underwent an emergency appendectomy, post operatively she was diagnosed as having acute intermittent porphyria when she complained of abdominal pain, nausea, vomiting, constipation and dark colored urine. Which of the following anesthetic agents is most likely to precipitate this attack?

- a. Methohexital
- b. Succinylcholine
- c. Halothane
- d. Midazolam

A

25. Which of the following is the antidote that may be of great benefit in early management of acetaminophen organ-specific toxicity?

- a. N-acetyl cysteine
- b. Naltrexone
- c. Naloxone
- d. Nalbuphine

26. The drug used for treatment of acute severe asthma are following EXCEPT.

- a. Nedocromil sodium
- b. Aminophylline infusion
- c. Hydrocortisone IV
- d. Subcutaneous epinephrine

27. A 30-year-old, married woman, suffering from peptic ulcer was taking a drug to relieve gastro-esophageal reflux symptoms for last 1 year. She presented to a gynecologist for the complaints of irregular menstruation. Which of the following anti-ulcer drug is most likely to cause these symptoms due to anti-androgen effects?

- a. Cimetidine
- b. Omeprazole
- c. Antacids
- d. Misoprostol

28. Which of the following agents is used to accelerate recovery from the sedative actions of intravenous benzodiazepines?

- a. Naloxone
- b. Ketamine
- c. Flumazenil
- d. Fomepizole



29. Which of the following antipsychotic drugs has the high risk of potentially fatal agranulocytosis at high doses?

- a. Haloperidol
- b. Clozapine
- c. Risperidone
- d. Chlorpromazine

**B**

30. Which of the following is a dopamine receptor agonist that is useful in the therapy of Parkinson's disease?

- a. Selegiline
- b. Bromocriptine
- c. Entacapone
- d. Amantadine

**B**

31. The minimal alveolar concentration of an inhalational anesthetic is a measure of its:

- a. Oil: Water partition coefficient
- b. Therapeutic index
- c. adverse effects
- d. Potency

**D**

31. Which of the following opioid drugs is used as an antidiarrheal agent?

- a. Loperamide
- b. Codeine
- c. Dextromethorphan
- d. Buprenorphine

32. Drug treatment of ulcerative colitis include all EXCEPT.

- a. Salicylate derivatives
- b. Immunosuppressants
- c. Corticosteroids
- d. H<sub>2</sub> receptor antagonists

33. Lignocaine has been employed as local anesthetic in minor surgical procedures. What is the purposed mechanism of action of lignocaine in neuronal membrane?

- a. Blockade of sodium channels
- b. Activation of sodium channels
- c. Activation of glutamate receptors
- d. Influx of calcium ions

34. The mechanism of antibacterial action of the Penicillin involves inhibition of;

- a. N-acetylmuramic acid synthesis
- b. Beta-lactamases
- c. Trans glycosylation
- d. Peptidoglycan cross-linking

35. A 19-year-old college student has well-controlled asthma but on reporting to the college health clinic, complains of a sore throat. On examination, he has typical signs of thrush, a fungal infection with *Candida albicans*. The asthma controller medication most likely to be associated with *Candida* infection is:

- a. Albuterol by aerosol
- b. Ipratropium by inhaler
- c. Beclomethasone by aerosol
- d. Montelukast by oral route

C

36. A 47 years old woman with choriocarcinoma is treated with very high doses of methotrexate (MTX). You anticipate significant host cell toxicity in response to the high MTX dose. Which of the following drugs would you give to limit toxic effects of the MTX on normal host cells?

- a. N acetyl cysteine
- b. Penicillamine
- c. Deferoxamine
- d. Leucovorin

D

37. Which of the following drug polymerizes in stomach acid and coats the ulcer beds, resulting in accelerated healing of peptic ulcer?

- a. Aluminum hydroxide
- b. Sucralfate
- c. Omeprazole
- d. Cimetidine

38. A 45-year-old patient, suffering from malaria has completed anti-malarial therapy. Which drug should be given later to eradicate schizonts and latent hypnozoites in the patient's liver?

- a. Artesunate
- b. Chloroquine
- c. Halofantrine
- d. Primaquine

39. Streptomycin and other aminoglycosides inhibit bacterial protein synthesis by binding to which of the following?

a. Peptidoglycan Units in the cell wall

b. 30 S ribosomal subunit

c. mRNA

d. DNA

40. Which of the following antifungal drug acts by binding to ergosterol and results in formation of pores in cell membrane?

a. Amphotericin B

b. Flucytosine

c. Ketoconazole

d. Griseofulvin

41. A jaundiced 01day old premature Infant with elevated free bilirubin is seen in the premature baby nursery. The mother has received an antibiotic combination for a urinary tract infection (UTI) one week before delivery. Which of the following is the most likely cause of the baby's kernicterus?

a. A sulfonamide

b. Erythromycin

c. A fourth generation cephalosporin

d. A tetracycline

**A**

42. Sulfonylurea lower blood sugar level by which of the following mechanisms.

a. Increase glucagon

b. Decrease insulin resistance by lowering body weight

c. Promote glucose uptake by muscle, liver and adipose tissue via an insulin independent process

d. Secrete insulin from the pancreas

50. Which of the following is a peripheral neuropathy?

43. Which of the following is drug of choice for treatment of extraintestinal amebiasis?

- a. Phenytoin
- b. Diloxanide Furoate
- c. **Metronidazole**
- d. Emetine

44. Which of the following compounds is incorrectly matched with its mechanism of action?

- a. Finasteride: Inhibits 5 $\alpha$ - reductase
- b. **Pioglitazone: Inhibits  $\alpha$ - glucosidase**
- c. Tamoxifen: Competitively blocks the binding of estrogens to their receptor
- d. Flutamide: Competitively blocks the binding of androgens to their receptor

45. A patient with AIDS is treated with a combination of agents one of which is zidovudine. Which of the following enzymes or replicative processes is the main target of this antiviral drug?

- a. **Nucleoside reverse transcriptase**
- b. Non-nucleoside reverse transcriptase
- c. Viral protease
- d. Viral Particle assembly

46. Quinolones are contraindicated in children under 18 years of age because they cause:

- a. Bone marrow suppression
- b. **Destruction of cartilage**

- c. Ototoxicity
- d. Nephrotoxicity

47. A patient with asthma is being treated effectively with an inhaled preparation of beclomethasone dipropionate. Which of the following adverse effects is of particular concern?

- a. Hoarseness of voice
- b. Megaloblastic anemia
- c. Hypoglycemia
- d. Constipation

**A**

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- a. Amphotericin B
- b. Flucytosine
- c. Ketoconazole
- d. Griseofulvin

49. A 23 years old woman has failed to become pregnant after 2 years of unprotected intercourse. What would be effective to treat this infertility due to anovulatory cycles.

- a. Clomiphene citrate
- b. A combination of estrogens and progesterone's
- c. Raloxifene
- d. Tamoxifen

3<sup>rd</sup> PROFESSOR

40. Which of the following drug is given in combination with Isoniazid to prevent peripheral neuropathy?

- a. Pyridoxine
- b. Thiamine
- c. Ascorbic acid
- d. Folic acid

51. A man is given a drug to reduce thyroid gland size and vascularity before surgical thyroidectomy. Which mechanism is responsible for its use in this setting?

- a. Inhibition of thyroid hormone release
- b. Inhibition of TSH secretion
- c. Inhibition of the sodium/iodide symporter
- d. Inhibition of thyroperoxidase

A