

(A) 問答題

1. TNF α 及其 monoclonal antibody 之免疫藥理作用而言： (10%)
 - a) TNF α 之化學特性及主要細胞來源為何?
 - b) TNF α monoclonal antibody 之作用點或結合為何?
 - c) TNF α monoclonal antibody 之臨床用途為何?
 - d) 列舉 TNF α monoclonal antibody 之臨床藥品。
 - e) 列舉抑制 TNF α 作用之機轉模式四種。
2. IFN- α 之免疫藥理作用而言： (10%)
 - a) IFN- α 之化學特性及細胞來源為何?
 - b) 列舉 IFN- α 之臨床藥品。
 - c) IFN- α 之臨床用途為何。
 - d) IFN- α 之作用機轉模式為何。
3. Azathioprine 之抗癌作用機轉及骨髓毒性相關症狀為何? (10%)
4. 試說明影響有機酸藥物在腎元(nephron)近端及遠端，經由腎血管釋放及再吸收之因素為何? (10%)
5. 試說明 Endothelin, Substance P, Kinin, Angiotensin 之生理作用並列舉其 Antagonist 在臨床之用途 (10%)

(B) 選擇題: **One choice** (60 %; 2x30%)

- () 1. Cetuximab is a monoclonal antibody, targeting (1) EGF; (2) tyrosine kinase; (3) Ras; (4) EGFR.
- () 2. Glucocorticoids: (1) interfering leucocyte trafficking (transmigration); (2) Enhancing leucocyte trafficking; (3) increasing immunoresponse; (4) depletes T cells.
- () 3. Cyclosporine: (1) increase cytokine release; (2) inhibit cytokine release; (3) activate T cell activation; (4) promote proliferation.
- () 4. Calcineurin is inhibited by (1) Thalidomide; (2) Cytokines; (3) Tacrolimus (4) Azathioprine
- () 5. Which of the following is the non-cell cycle specific anti-cancer drug? (1) Vinca alkaloids; (2) Etoposide; (3) Cisplatin; (4) Bleomycin.
- () 6. Which of the following is wrong for tamoxifen: (1) an estrogen inhibitor (2) usefull to treat breast cancer; (3) inhibit insulin-like growth factor (IGF-1); (4) an androgen receptor antagonist.
- () 7. Thalidomide: (1) higher molecular weight compound; (2) useful hypnotics; (3) immunosuppressive agent; (4) anti-teratogenic agent.
- () 8. Which kind of receptors whose ligands come from heterogenous origin? (1) Steroid; (2) Cytokine; (3) Tyrosine kinase; (4) adrenergic receptor.
- () 9. Long term administration of higher dose aspirin usually leads to (1) hyperuricemia; (2) hypouricemia; (3) thrombosis; (4) hypertension.
- () 10. Which of the following inhibits BPH by high affinity for α 1A and α 1D than α 1B subtype adrenoceptor inhibition, unrelated to anti-hypertension? (1) Doxazosin; (2) Terazosin; (3) Tamsulosin; (4) Prazosin.
- () 11. Which of the following is the specific agent used to reverse severe in-toxication of digitalis? (1) Digoxin; (2) Digitoxin; (3) Dogoxin immune fab; (4) Cetuzumab.
- () 12. Dobutamine: (1) beta 2 agonist useful for asthma; (2) beta 1 agonist useful for heart failure; (3) beta 2 agonist useful for reducing cardiac output; (4) for increasing ventricular filling pressure.
- () 13. Bosentan: (1) useful for pulmonary hypertension; (2) useful for heart failure; (3) with inotropic activity; (4) reducing hepatotoxicity.
- () 14. Which of the following is correct to affect the lipid metabolism? (1) fenofibrate increases PPAR γ ; (2) fenofibrate increases PPAR α ; (3) simvastatin increases PPAR γ and reduces PPAR α expression; (3) pioglitazone increases PPAR α expression.
- () 15. Celecoxib: (1) selective COX-1 inhibitor; (2) selective COX-2 inhibitor; (3) inducing hypotension; (4) COX-2 monoclonal anti-body.

- () 16. Which of the following binds TNF- α molecules and inhibit lymphotoxin- α (1) Infliximab; (2) Adalimumab; (3) Etanercept; (4) Rituximab.
- () 17. Entecavir is used for the treatment of (1) hepatitis C; (2) hepatitis B; (3) influenza.
- () 18. Rivantadine is used for the treatment of (1) hepatitis C; (2) hepatitis B; (3) influenza.
- () 19. For a patient with gouty joint pain, colchicine is used to: (1) *inhibit* diarrhea; (2) *inhibit* phagocytosis of urate crystal by synoviocytes; (3) *induce* phagocytosis of urate crystal by synoviocytes; (4) *treat* chronic gout.
- () 20. Pegylated interferon alfa-2b is subcutaneously used for the treatment of: (1) Chronic hepatitis C; (2) acute hepatitis B; (3) acute hepatitis C; (4) chronic hepatitis B.
- () 21. Lamivudine (3TC) is orally used for the treatment of (1) hepatitis B infection; (2) hepatitis C infection; (3) influenza.
- () 22. Inhaled and oral ribavirin is used for the treatment of (1) hepatitis C; (2) hepatitis B; (3) influenza.
- () 23. Omalizumab is used for the treatment of (1) hepatitis C; (2) hepatitis B; (3) asthma.
- () 24. Which of the following is the mechanism of action of acarbose : (1) Inhibiting ATP-sensitive potassium channel; (2) inhibiting hepatic gluconeogenesis; (3) activating PPARs; (4) inhibiting α -glucosidases.
- () 25. Which of the following is inhibited by finasteride to attenuate benign prostatic hypertrophy? (1) estrogen; (2) progesterone; (3) testosterone; (4) dihydrotestosterone.
- () 26. Which of the following is the action site of tetracycline?
(1) Ribosome; (2) DNA gyrase; (3) folate synthesis; (4) RNA polymerase; (5) cell wall transpeptidase.
- () 27. Which of the following is used to treat penicillins-induced anaphylactic shock?
(1) Epinephrine; (2) hydrocortisone; (3) methylprednisolone; (4) Diphenhydramine. (5) loratadine.
- () 28. Which of the following is not ketamine' effect?
(1) anesthetics; (2) decrease of heart rate; (3) decrease the respiratory rate; (4) psychotomimetic activity.
- () 29. Which of the following diuretics is used for decreasing intracranial pressure? (1) Mannitol; (2) Acetazolamide ; (3) Amiloride; (4) Ethacrynic acid.
- () 30. Which of the following is used in the treatment of nephrogenic diabetes insipidus ? (1) Thiazides; (2) Acetazolamide; (3) Bumetanide; (4) Spironolactone.