

**AFIP MINIBOARD EXAMINATION  
MAY 2008**

**LAB ANIMAL PATHOLOGY**

1. Hallmark lesions of infection with polytropic strains of mouse hepatitis virus include:

- A. Lymphocytic syncytia in mesenteric lymph nodes
- B. Lymphohistiocytic hepatitis and splenitis
- C. Syncytia and multifocal necrosis in spleen and liver
- D. Intestinal mucosal necrosis and syncytia
- E. Adrenal cortical necrosis

2. All of the following are lesions of rat parvovirus EXCEPT:

- A. Cerebral hemorrhage
- B. Cerebellar hypoplasia
- C. Testicular hemorrhage
- D. Necrohemorrhagic enteritis
- E. Amphophilic intranuclear inclusions in hepatocytes

3. Which of the following species is particularly susceptible to Tyzzer's disease and is recognized to be a useful sentinel animal?

- A. C56BL6 mouse
- B. Mongolian gerbil
- C. Brown Norway rat
- D. Syrian hamster
- E. European rabbit

4. What pathogen is used in the mouse model for attaching-effacing *E. coli* disease in humans?

- A. *Klebsiella pneumoniae*
- B. *Citrobacter rodentium*
- C. *Porphyromonas gingivalis*
- D. *Salmonella typhimurium*
- E. *Moraxella catarrhalis*

5. A marker of anaplasia in ferret adrenocortical tumors is:

- A. LHR (LH receptor)
- B. GATA-4
- C. Inhibin- $\alpha$
- D. LYVE1
- E. Calponin

6. Concerning tuberculosis in nonhuman primates, which of the following statements are not true?

1. It is caused by *Mycobacterium bovis*
2. Acid fast bacilli are numerous within lesions
3. New world primates are more susceptible
4. Old world primates are more susceptible
5. Lymph node necrosis is a common finding

- A. 1, 2
- B. 1, 2, 3
- C. 2, 3
- D. 2, 4
- E. 2, 4, 5

7. Nasal dermatitis in Mongolian gerbils has been associated with:

- A. *Staphylococcus xylosus*
- B. *Citrobacter rodentium*
- C. *Bordetella bronchiseptica*
- D. *Staphylococcus aureus*
- E. A and D

8. Causes of hyperplastic colitis in mice (including immune suppressed animals) include all EXCEPT:

- A. *Citrobacter rodentium*
- B. *Escherichia coli*
- C. *Helicobacter* spp.
- D. Enterotropic mouse hepatitis virus
- E. *Clostridium piliforme*

9. All of the following are characteristic of Rat Respiratory Virus Infection EXCEPT:

- A. Bronchial necrosis
- B. Subpleural grey-white foci
- C. Type II pneumocyte hyperplasia
- D. Perivascular inflammation in lung
- E. Lymphohistiocytic interstitial alveolitis

10. Regarding hamster polyoma virus, which of the following are true?

1. It can result in transmissible lymphoma
2. It can result in hair follicle epitheliomas
3. It can result in subclinical infections
4. It can result in a persistent viraemia

- A. 1
- B. 1, 2
- C. 1, 3
- D. 1, 2, 4
- E. 1, 2, 3, 4

11. All are true concerning chronic progressive nephropathy in rats EXCEPT:

- A. Males are predisposed
- B. Is age-related
- C. Common in Sprague-Dawley strain
- D. Associated with caloric restrictive diets
- E. Involves histopathologic changes of glomeruli and tubules

12. Organs consistently involved in alveolar echinococcosis in Cynomolgus monkeys include the following EXCEPT

- A. Lung
- B. Liver
- C. Pancreas
- D. Kidney
- E. Brain

13. Which of the following does not cause ulcerative colitis in nonhuman primates?

1. *Yersinia enterocolitica*
2. *Staphylococcus aureus*
3. *Campylobacter jejuni*
4. *Shigella flexneri*
5. *Salmonella spp.*

- A. 1, 2
- B. 2
- C. 3
- D. 2, 4
- E. 5

14. Aural cholesteatoma is a condition seen in approximately 50% of adult:

- A. Hamsters
- B. Guinea pigs
- C. Sand rats
- D. Gerbils
- E. Cotton rats

15. In mice, hepatic and splenic necrosis, coupled with epidermal hyperplasia and intracytoplasmic inclusion bodies are pathognomonic for:

- A. Mouse hepatitis virus infection
- B. Ectromelia virus infection
- C. Tyzzer's disease
- D. Murine leukemia virus infection
- E. None of the above

16. Which of the following is pathognomonic for Infectious Diarrhea of Infant Rats?
- A. Crypt necrosis
  - B. Lymphoid necrosis
  - C. Attenuated intestinal villi
  - D. Intestinal epithelial syncytia
  - E. Eosinophilic intracytoplasmic inclusion bodies
17. In hamsters, transmissible lymphoma can occur in all of the following tissues EXCEPT:
- A. Spleen
  - B. Mesenteric lymph nodes
  - C. Axillary lymph nodes
  - D. Cervical lymph nodes
  - E. Kidney
18. The most common spontaneous neoplasm in Sprague-Dawley rats less than 50 weeks of age is:
- A. Adenoma of pituitary gland
  - B. Bronchio-alveolar adenoma
  - C. Mammary fibroadenoma
  - D. Lymphoma
  - E. Histiocytic sarcoma

19. Kurloff cells are found in all of the following tissues of guinea pigs EXCEPT:
- A. Spleen
  - B. Thymus
  - C. Lymph nodes
  - D. Bone marrow
  - E. Peripheral blood
20. A macaque with non-responsive diarrhea, rashes, wasting, pneumonia and encephalitis is most likely infected with?
- A. Simian Immunodeficiency Virus
  - B. Simian Type D Retrovirus
  - C. *Mycobacterium tuberculosis*
  - D. *Mycobacterium bovis*
  - E. *Streptococcus pneumoniae*
21. Lesions of Sendai virus infection in mice include all EXCEPT:
- A. Necrotizing bronchiolitis
  - B. Marked peribronchiolar lymphoid proliferation
  - C. Proliferative alveolitis with mononuclear interstitial infiltrates
  - D. Bronchiolar epithelial syncytia
  - E. Intracytoplasmic eosinophilic inclusions

22. The virulence of *Bacillus anthracis* is due primarily to:

1. Secreted exotoxins
2. Endotoxin
3. Macrophage membrane receptor mimicry
4. Anti-phagocytic properties of the capsule

- A. 1, 3
- B. 1, 4
- C. 2, 3
- D. 2, 4
- E. 2, 3, 4

23. All of the following are seen with ovarian cysts (cystic rete ovarii) in guinea pigs EXCEPT:

- A. Cystic endometrial hyperplasia
- B. Fibroleiomyomas
- C. Endometritis
- D. Mucometra
- E. Hirsutism

24. Concerning amyloidosis in nonhuman primates which of the following is(are) true:

1. Primary amyloidosis is the most common form
2. Amyloid deposition may occur in the splenic white pulp
3. It is usually associated with inflammatory conditions
4. Deposition in the adrenal gland is usually in the medulla only
5. Deposition may occur in the heart

- A. 1, 2
- B. 2, 3
- C. 2, 3, 4
- D. 2, 3, 5
- E. 3, 5

25. Polycystic Disease in hamsters involves the formation of cysts in all of the following tissues EXCEPT:

- A. Liver
- B. Epididymis
- C. Seminal vesicles
- D. Kidney
- E.. Pancreas