

## OLD QUESTION

Which culture medium is preferred when trying to grow the feline leprosy mycobacterium (*Mycobacterium lepraemurium*)?

- a. **Ogawa egg yolk medium**
- b. blood agar
- c. Lowenstein-Jensen medium
- d. Stonebrink medium

Infectious Disease Small Animal (category)

## NEW QUESTION

A 4-year-old neutered male, indoor/outdoor cat is referred for evaluation of multiple, 0.5-4cm, fleshy, moveable, painless nodules of the forelimbs and the labial commissures. The cat is reported to hunt rodents. The remainder of the physical examination is normal. Aspiration of the nodules reveals neutrophils and foamy macrophages with a Romanowsky stain. Subsequent Ziehl Neelsen staining reveals abundant, well-stained, NON-filamentous bacilli within the macrophages. Which of the following will identify the genus and species of the etiologic agent?

- a. Positive culture on Lowenstein-Jensen medium
- b. Histopathology with immunohistochemistry
- c. Polymerase chain reaction and sequencing
- d. Enzyme-linked immunosorbent assay

## References

1. Turenne CY, Wallace R, and Behr MA. *Mycobacterium avium* in the Postgenomic Era. *Clin. Microbiol.Rev.* 2006, 20(2): 205.
2. Hughes MS, James G, Taylor MJ, et al. PCR studies of feline leprosy cases. *J Feline Med Surg.* 2004 Aug;6(4):235-43.
3. Courtin F, Huerre M, Fyfe J, et al. A case of feline leprosy caused by *Mycobacterium lepraemurium* originating from the island of Kythira (Greece): diagnosis and treatment. *J Feline Med Surg.* 2007 Jun;9(3): 238-41.

## OLD QUESTION

Which of the following diseases in cattle is caused by bovine herpes virus 2?

- a. mammary pustular dermatitis
- b. **pseudolumpy skin disease**
- c. contagious viral pustular dermatitis
- d. foot and mouth disease

Infectious Large Animal (category)

References:

- 1. d'Offay JM, et al. Use of a polymerase chain reaction assay to detect bovine herpes virus type 2 DNA in skin lesions from cattle suspected to have pseudo-lumpy skin disease J Am Vet Med Assoc. 2003; 222:1404-7, 1366-7.
- 2. Scott DW. Atlas of Farm Animal Derm. 2007. pg 48-49.

## NEW QUESTION

A herd of African Holstein cows are affected with two lesion types. Some of the cows exhibit multifocal, circular, raised lesions 2-3 cm in diameter in the perineal and trunk areas; some of these lesions are alopecic, and clinically resemble dermatophytosis. Other cows in the herd have focal, painful, ulcerated, necrotic lesions of the udders.

Bacterial cultures and fungal cultures were negative. Histopathology of the raised lesions revealed severe orthokeratotic hyperkeratosis. Lymphocytes and macrophages diffusely infiltrated the dermis and adenexa. No sequestra were seen.

A PCR was negative for Lumpy Skin Disease Virus.

Which of the following viruses the most likely cause for these two distinct clinical presentations?

- 1. **Bovine herpesvirus -2**
- 2. *Capripoxvirus*
- 3. *Orbivirus*
- 4. *Porcine herpesvirus-1*

References:

- 1. d'Offay JM, et al. Use of a polymerase chain reaction assay to detect bovine herpes virus type 2 DNA in skin lesions from cattle suspected to have pseudo-lumpy skin disease J Am Vet Med Assoc. 2003; 222:1404-7, 1366-7.
- 2. Scott DW. Atlas of Farm Animal Derm. 2007. pg 48-49.
- 3. Brenner J, Yadin H, Perl S et al. Herpesvirus type 2 in biopsy of a cow with possible pseudo-lumpy skin disease. *Vet Rec.* 2009; 165:539-40.

## OLD QUESTION

Which life stage of *Leishmania* is ingested by sand flies when they take a blood meal from a host with leishmaniasis?

- a. paramastigote
- b. procyclic promastigote
- c. metacyclic promastigote
- d. **amastigote**

## Parasitology Small Animal (category)

References:

1. Eddlestone, SM; Visceral Leishmaniasis in a dog from Maryland; JAVMA, 2000; 217(11): 1686-1688.
2. Greene; Infectious Disease of the Dog and Cat, 3rd p685-689.
3. Greene; Infectious Disease of the Dog and Cat, p. 450-456 (Chapter 73; Slappendel RJ and Ferrer, L), 1998, 2nd edition.
4. Ciaramella P and Corona M. Canine Leishmaniasis: Clinical and Diagnostic Aspects, Compendium Vol 25(5), May 2003, P. 358-369.
5. Lindsay DS et al. Leishmaniasis in American Foxhounds: An emerging zoonosis. Compendium Vol24(4), April 2002, P. 304-313.
6. Bravo L. et al. Canine Leishmaniasis in the United States. Compendium Vol. 15(5), May, 1993, P. 699-708.

## NEW QUESTION

If you would like to develop a treatment that disrupts only the promastigote stage of leishmania, which of the following would you consider interfering with?

- a. Transmission of the parasite from an infected dog to the vector
- b. Transmission of the parasite vertically
- c. **Replication in the vector's gut**
- d. Replication inside macrophages

References:

1. Greene; Infectious Disease of the Dog and Cat, 3rd p685-689.
2. Ciaramella P and Corona M. Canine Leishmaniasis: Clinical and Diagnostic Aspects, Compendium Vol 25(5), May 2003, P. 358-369.
3. Paltrinieri S. Guidelines for diagnosis and clinical classification of leishmaniasis in dogs. JAVMA, Vol 236, No. 11, June 1, 2010
4. Petersen CA. Canine Leishmaniasis in North America: Emerging or Newly Recognized? Vet Clin Small Anim 39 (2009) 1065–1074