*JZWM* 2021 52(4):1257-1262

[**ASSESSMENT OF MULTIANTIGEN PRINT IMMUNOASSAY AND RAPID LATERAL-FLOW TEST FOR THE DETECTION OF *MYCOBACTERIUM BOVIS* INFECTION IN MALAYAN TAPIR (*TAPIRUS INDICUS*)**](https://doi.org/10.1638/2021-0054)

**Practice Question:** Name three species within the mycobacterium tuberculosis complex

Answer: *Mycobacterium bovis, M. tuberculosis, M. pinnipedii*

*JWD* 2022 58(2):309-321

[**Characterizing tuberculosis progression in wild meerkats (*Suricata suricatta*) from fecal samples and clinical signs**](https://doi.org/10.7589/jwd-d-21-00063)

**Practice Question:** On average, how long does it take for clinical signs to develop in a meerkat (*Suricata suricatta*) that is fecal PCR-positive for *Mycobacterium suricattae*?

1. 6 months
2. 12 months
3. 24 months
4. 36 months
5. 48 months

Answer: B

**QUESTION:** Which side effect has been seen with treatment of *Mycobacterium avium subsp. Hominissuis* with rifampin, isoniazid, and clarithromycin in Lowland tapirs that has not been reported with antimycobacterial treatment in other species?

1. Increased AST and GGT
2. Red tinged urine and feces
3. Increased serum iron
4. Severe leukopenia
5. Lethargy and hyporexia

Answer: C - important due to tapir sensitivity to iron overload; decreased iron in diet during treatment; resolved over several months after discontinuation of therapy

*Source: Marcordes et al. TREATMENT OF MYCOBACTERIOSIS CAUSED BY MYCOBACTERIUM AVIUM SSP. HOMINISSUIS IN A GROUP OF CAPTIVE LOWLAND TAPIRS ( TAPIRUS TERRESTRIS). JZWM 2021.*

**QUESTION:** Which plasma cytokine shows promise for being a possible biomarker of mycobacterium

bovis in cheetahs based on a study evaluating cytokine ELISA kits?

1. IFN-y
2. IL 12
3. TNF-alpha
4. IL 10
5. IL Iβ

Answer: A

*Source: Gumbo et al. CYTOKINE-RELEASE ASSAY FOR THE DETECTION OF MYCOBACTERIUM BOVIS INFECTION IN CHEETAH (ACINONYX JUBATUS). JZWM 2021.*

Yee, JoAnn L., et al. "Tuberculosis detection in nonhuman primates is enhanced by use of testing algorithms that include an interferon-γ release assay." *American journal of veterinary research* 83.1 (2022): 15-22.

**Practice Question:**

Which of the following tests remains the primary tool for diagnosis and surveillance of *Mycobacterium tuberculosis* complex (MTBC) in non-human primates?

A. Antibody detection

B. Culture

C. Interferon-gamma release assay

D. PCR

**E. Tuberculin skin test**

Fowler Zoo and Wild Animal Medicine 10th ed, Chapter 28. Ecosystem and Multiple Species Effects of Tuberculosis in Kruger National Park.

**Practice Question:**

Which of the following species is the primary maintenance host of *Mycobacterium bovis* in Kruger National Park?

**A. African buffalo (*Syncerus caffer*)**

B. African elephant (*Loxodonta africana*)

C. Greater kudu (*Tragelaphus strepsiceros*)

D. Impala (*Aepyceros melampus*)

E. Wildebeest (*Connochaetes taurinus*)

1. Which of the following is true about the relationship between Texas white tailed deer and Mycobacterium avium paratuberculosis (MAP)?
	1. The most susceptible animals are within the age range of 8-15 months old
	2. Females are more susceptible than males
	3. Bacteriologic culture of feces has better sensitivity than nested PCR
	4. Basic soils increase the risk of infection
	5. Seroprevalence of disease tended to be higher in adults

Answer: E

1. Phacochoerus africanus in South Africa were found to have absent antibodies to which of the following diseases?
	1. African swine fever
	2. Mycobacterium bovis
	3. Brucella
	4. Avian influenza
	5. Rift valley fever

Answer: C