Application of Polymerase Chain Reaction to confirm mycobacterium infection in goat
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Objective: Evaluation of PCR test to confirm that samples that showed mycobacterium infection.

Animals: One thousand goats, lymph nodes and organs with visible lesion in reactor goats.

Procedure: At first the goats were tested by CDT method. Measuring thickness of skin, clinical and necropsy examination in reactor and suspicious goats. Sampling of organs with visible lesion. Bacteriologic test and PCR by (Hot start PCR) kit. The type of primer used in study was IS116.

Results: In all goats which were studied, 7 goats responded positive and 4 suspicious. In 11 goats under study, 4 show mycobacterium tuberculosis complex by PCR test those result were compare with result of bacteriologic tests.

Clinical implications: Not only this study is the first research about mycobacterium in goat in Iran, but also is the first research to confirm mycobacterium tuberculosis complex infection in small ruminant and evaluation PCR test for diagnosis mycobacterium in samples. J. Fac. Vet. Med. Univ. Tehran. 59; 1: 97-100, 2004.

Key words: Goat, mycobacterium, PCR, tuberculosis.

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A Study of Antioxidant Enzyme Activities and Oxidative Damage in Honey Bees

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ABSTRACT

The present study aimed to investigate the antioxidative enzymes activities and oxidative damage in honey bees (Apis mellifera) using different samples from different regions in Najaf, Iraq. The antioxidative enzymes activities were measured using the standard methods and the levels of oxidative damage were estimated through the measurement of malondialdehyde (MDA) content. The results showed that the activity of superoxide dismutase (SOD) was significantly higher in the workers than in the drones and the queens. The activity of catalase (CAT) was also significantly higher in the workers than in the drones and the queens. The activity of glutathione peroxidase (GPx) was also significantly higher in the workers than in the drones and the queens. The level of MDA was significantly lower in the workers than in the drones and the queens. These findings suggest that the antioxidative enzymes activities play a crucial role in the resistance of honey bees to oxidative stress. Additionally, the results indicated that the antioxidative enzymes activities and oxidative damage are influenced by the region of origin of the samples. Further studies are needed to explore the underlying mechanisms and to identify potential strategies for the protection of honey bees against oxidative stress.
نمونه‌ها) داخل همان ایندیرا اضافه کرده و سپس روی آن یک قطعه روش معمول برخی رنگ می‌شود تا سطح را تشخیص داده‌شود.

**نتایج**

از مجموعه‌ی یک هزار آزمایش برای استفاده در نمونه‌گیری DNA انتخاب گردید. تعداد معرفی شده مولکول‌های انتقالی (PCR) از 19 مستند در 19 سطح و 19 آزمایش به‌طور پایدار بود.

**بحث**

از نمونه‌های مورد استفاده در این مطالعه، 182 نمونه مربوط به آناناز و همگان در سال 1996 انتخاب شدند. همه‌ی این بیش از 80 درصد مورد نظر PCR را تشخیص دادند و در تمام نمونه‌ها تشخیص و آزمایش گردید.

**آزمایش آزمایش نهایی PCR**

1. مولکول‌های DNA و primer
2. مولکول‌های DNA و primer
3. مولکول‌های DNA و primer

**مورد استفاده**

(حول PCR)
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