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THE ISOLATION, CULTURE AND IDENTIFICATION OF SKELETAL MUSCLE SATELLITE CELLS FROM BACTRIAN CAMEL

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ABSTRACT

In this experiment, the skeletal muscle tissue of Bactrian camel was used as sample material. The cells of primary generation were cultured by two-step enzymatic digestion and tissue block culture. The primary skeletal muscle satellite cells were purified by differential adherence methods, and then were determined by growth curve analysis. The advantages of mode of proliferation of cells were that the cells could maintain high activity, comparatively not tend to be contaminated, and gain a long culture period, which is more suitable for the *in vitro* culture of Bactrian camel satellite cells. When using the method called LASER Confocal imaging, with immunofluorescence labeling, to identify the specific gene in skeletal muscle satellite cells, the PAX7 expression was positive in cell lines. In addition, PCR amplification bands showed that PAX7, MYF5, and Desmin genes were all clearly expressed. After induced culture, satellite cells started the myogenic differentiation process. Through the above methods, comparatively pure Bactrian camel skeletal muscle satellite cells were obtained successfully and passage proces were carried out stably. In conclusion, the *in vitro* culture system of Bactrian camel skeletal muscle satellite cells was successfully established.

Key words: Bactrian camel, *in vitro* culture, skeletal muscle satellite cells