

AMPLIFICATION AND SEQUENCING OF ENERGY RELATED MITOCHONDRIAL GENES FOR SOME DOMESTIC ANIMALS IN SAUDI ARABIA

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ABSTRACT

The sequences of mitochondrial genes encoding for cytochrome C oxidase subunits 1 and 2 (CO1 and CO2), ATPase synthase subunit 6 (ATP6) and cytochrome b (cytb) were collected from the Genbank database for some domestic animals and were aligned manually. The conserved regions were selected to design new primers for amplification and sequencing these genes. The designed primers produced positive amplification and sequencing results in spite of the high genetic variability shown among the studied animals. This method is expected to accelerate both amplification and sequencing domestic animals mitogenomes. This could aid to understand the domestic animals genetic framework necessary for conservation and breeding management.

Key words: Conserved primers, domestication, mitogenome, Saudi Arabia