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Title: DNA barcode through cytochrome b gene information of mtDNA in native chicken strains
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Abstract: This study was carried out to figure out the potentiality of a cytochrome b gene as a barcoding tool in discriminating native chicken strains and other Gallus gallus species. We performed PCR amplification using universal primer to amplify around 415 bp fragment of cytochrome b gene of mtDNA. The results revealed that all Saudi chicken strains were identical to each other but when compared with other species of Gallus the differences were exciting. The phylogenetic tree revealed that there were seven clusters represented for native strains and were clustered together especially in black strain and dark brown ones. The results have confirmed that using cytochrome b gene to discriminate between Saudi chicken strains and other species of G. gallus fowl was a very sufficient tool. Moreover, we can consider short fragment of cytochrome b gene of mtDNA as a universal DNA barcode region. It was a much more accurate and efficient tool to discriminate interspecies than intraspecies. We think it needs more studies to confirm this concept, and we have to apply that tool for many species of vertebrate and invertebrate as well.

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