World Academy of Science, Engineering and Technology
International Journal of Animal and Veterinary Sciences
Vol:17, No:07, 2023

Twenty-Five Polymorphic Microsatellite Loci Used To Genotype Some Camel Types and Subtypes From Sudan, Qatar, Chad, And Somalia

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Abstract : Twenty Five polymorphic microsatellite out of 50 Loci were used to genotype some camel (Camelus dromedarius) types and subtypes in Sudan (Naylawi, Shanapla, Lahawi, Kinani, Rashaydi, Bani-Aamir, Annafi, Bishari Shallagyai and Bishari Arririt) and that from Qatar (OmmaniHJ, OmmaniKH, Majaheem, Pakistani Sindi, Pakistani Punjabi and Pakistani) and for comparative; one type from Somalia (Aarhou) and another from Chad (Spotted) were investigated. The highest number of alleles were 23 in Locus CVRL 01, and lowest were 2 in YWLL 59. The observed heterozygosity (Hobs) were 0.950 and 0.049 for VOLP08 and YWLL09, respectively, while the expected heterozygosity (HExp) were 0.915 and 0.362 for Locus VOLP67 and YWLL58, respectively, and the HExp mean was 0.7378. Polymorphic Information Content (PIC) ranged between 0.907 - 0.345 in Locus VOLP67 and YWLL58, and the PIC mean was 0.7002. The genetic distance ranged between 0.545 – 0.098 for Shallagyai (Bishari subtype) – Pakistani Sindi subtype and between Annafi - Rashaydi, respectively. The genetic distance between spotted and all types ranged between 0.223 with Arririt (Bishari subtype) and 0.463 with Punjabi (Pakistani subtype) that found in Qatar, while all types with Aarhou ranged between 0.215 for Arririt and 0.469 with Punjabi (Pakistani subtype). The dondrogram shows that there is a relationship between the genetic makeup and geographical distributions and also between the genetic makeup and phenotypic characteristic. Individual assignment was calculated, 46.62% correctly assigned and 46.87% quality index. Hardy Weinberg Equivalent (HWE) was also calculated. Key words: Camel, genotype, polymorphic microsatellite

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Conference Title : ICASVM 2023 : International Conference on Animal Science and Veterinary Medicine
Conference Location : London, United Kingdom
Conference Dates : July 24-25, 2023