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# Allelic Variations of *LEA* and Dehydrin Genes in Chickpea Genotypes (*Cicer arietinum* L.)

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**Abstract :** Investigation was carried out at the Biotechnology Lab. Department of Agronomy, Faculty of Agriculture – Damascus University in the year 2016. The aim was to detect the allelic variations of *LEA* and Dehydrin genes in different genotypes of Chickpea (*Cicer arietinum*). Results of *LEA* and Dehydrin genes (responsible for drought tolerance) variation have shown a clear difference among the studied genotypes. Variation in the molecular weight between loci per gene was very high in some cases, while it had a high degree of symmetry in other cases, and was easily distinguished on 4% metaphor agarose gel. The PCR results for the Dehydrin genes *Dhn3* and *Dhn4* have shown a one morphological pattern in the most of the studied genotypes, while for the *Dhn1*and *Dhn2* only two patterns was found. *LEA1* showed three patterns, while the gene *LEA2* showed six patterns. The *LEA1* was superior in the number of polymorphic patterns, as the number of total patterns was 85 patterns in all genotypes, but on the other hand the *Dhn4* showed the lowest number of patterns with only 22 patterns. The genotypes (7, 8, 17) showed the largest number of patterns with 12 patterns, and the genotypes (19, 20) showed the lowest number with only 2 patterns.
**Key Words:** Chickpea, Alleles Variation, Dehydrin Gene, *LEA* Gene.



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